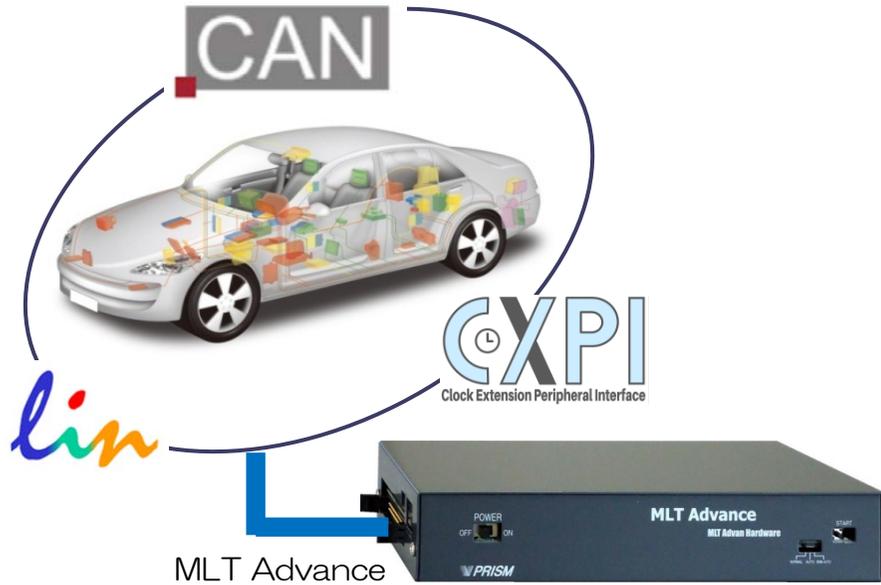


# Multi function simulator for Multi LAN Tester

# M P S

## Multi Protocol Simulator



- Support for CAN / LIN / CXPI communication (Customizable for other communication)
- Working cooperation with Navigator, and the simulation is possible while performing communication logging.
- Support for the stand-alone operation also.
- Define the BitAssign data and control by the data unit.
- Communication that requires time accuracy (periodic transmission) instructs to MLT hardware.
- Displaying the value of data which wants to monitor in real time.

# Development environment

## MPS

CAN

MPS-C

¥200,000/1 license※

LIN

MPS-L

¥200,000/1 license※

CXPI

MPS-CX

Basic function

¥200,000/1 license※

extended function

(MPS-CX-OP-CONF)

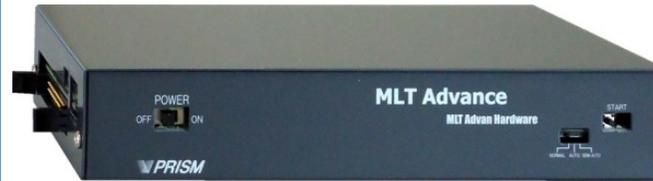
1. Bus corruption
2. Error frame transmission
3. Changing the clock width and JASO issue protocol conformance test (Data link layer) Sample panel

¥800,000/1 license※

※The license is one year renewal.  
(Update cost : 30% of license purchase amount)

## Multi LAN Tester (Sold separately)

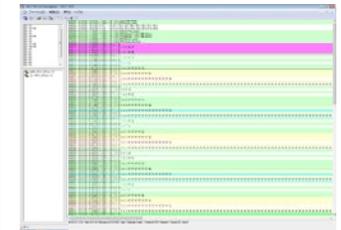
MLT Advance



MLT PX-10 ※ Some features are limited.



< included >  
MLT Navigator



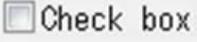
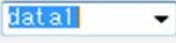
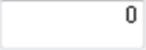
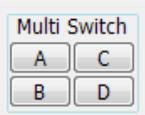
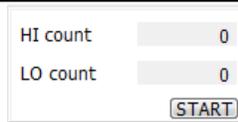
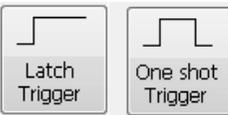
¥198,000(JPY) ~  
Depends on the protocol

## Operation environment

Operating system	Windows 7 (32/64bit)
CPU	CORE i3 or higher (CORE i5 or higher is recommended.)
Main memory	2GB or more (3GB or more is recommended.)
Hard disk free space	5GB or more
Disk device	HDD 5200rpm (320GB or more is recommended.)
Display	A resolution of 1366×768 or higher are recommended.
Others	MLT PX-10 etc. (PRISM Hardware)

# Easy to use GUI (ActiveX control)

- Prepare many controls of Button, LED, Data Counter, Switch, Digital control and so on.
- Operation and display in conjunction with the bit assign data is possible.

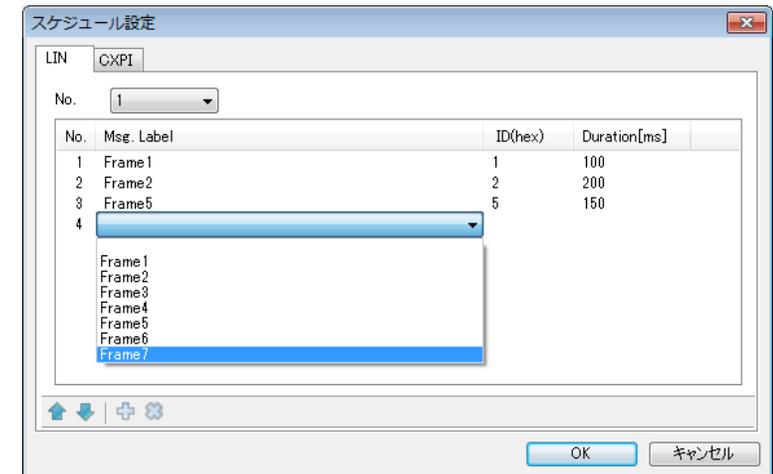
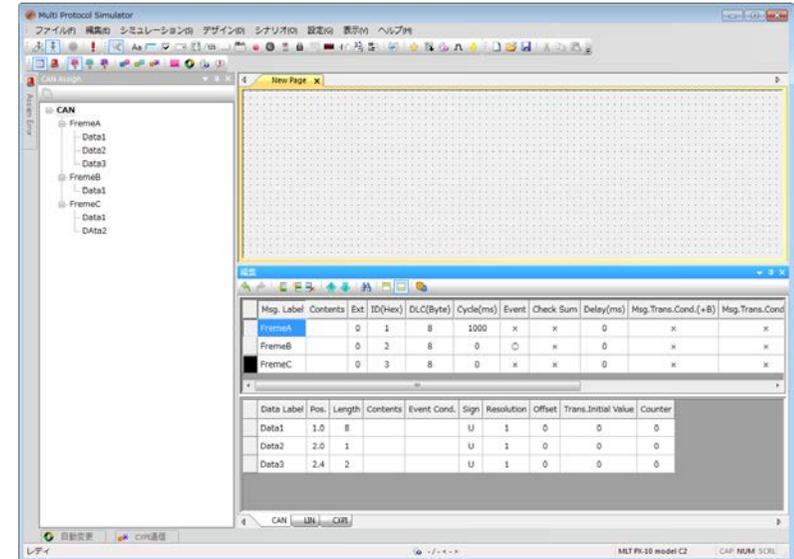
Label	-	Free input	Toggle Button	Tx/Rx		Check Box	Tx/Rx	
Image								
Combo Box	Tx/Rx		List Box	Tx/Rx		Text	Tx/Rx	
Button	Tx		Group Box	-		3-point Switch	Tx	
Meter	Rx		Switch	Tx/Rx		LED	Rx	
Multi Switch	Tx		Port Input Monitoring	Rx		Trigger Output Setup	Tx	
Data Counter	Rx		Digital	Rx		Combo Slider	Tx/Rx	
Special Function	Tx		Pattern	Tx		Operation of stabilized Power Supply	Tx	
Scenario Operation	Tx		Diagnostics (Response)	Rx		Diagnostics (Request)	Tx	

# Creation of Simulation File

## ■ Editing of Bit Assign Data

- Equipped with BitAssign data editing function.
- Saving only BitAssign data to file and reading.
- By associating frame names and data names, it is possible to construct a simulation environment that is easy to analyze.

	Frame information	Data information
CAN	Msg.Label Frame type ID DLC Transmission cycle Support of event-driven transmission Support of check sum Delay Msg.Trans.Cond Specify the position of CheckSum	Data Label Bit position data length Sign resolution Offset counter Initial value of transmission
LIN	Msg.Label ID Parity DLC Type of check sum Delay Msg.Trans.Cond	Data Label Bit position data length Sign Initial value of transmission
CXPI	Msg.Label ID DLC Wakeup Sleep Counter Burst Event Retry Delay Msg.Trans.Cond	Data Label Bit position data length Sign Initial value of transmission



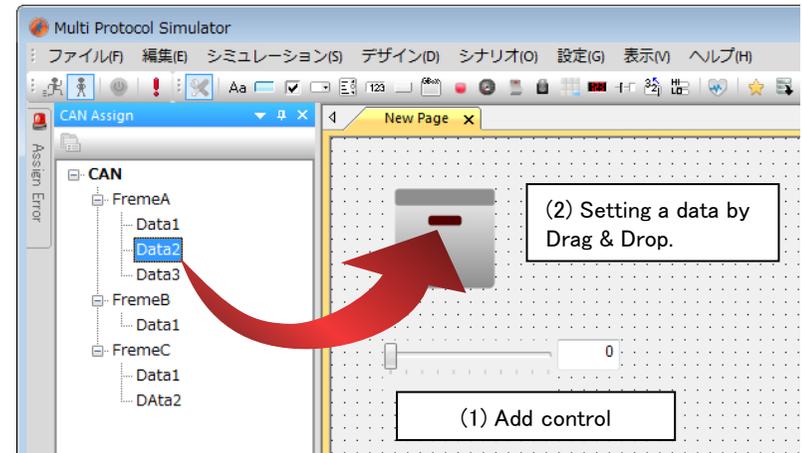
## ■ Schedule Settings (LIN/CXPI)

- 20 types of schedule table can be set (valid in master mode).
- Msg.Label and ID refer to the frame information defined to BitAssign data.

# Creation of Simulation File

## ■ Association of BitAssign Data

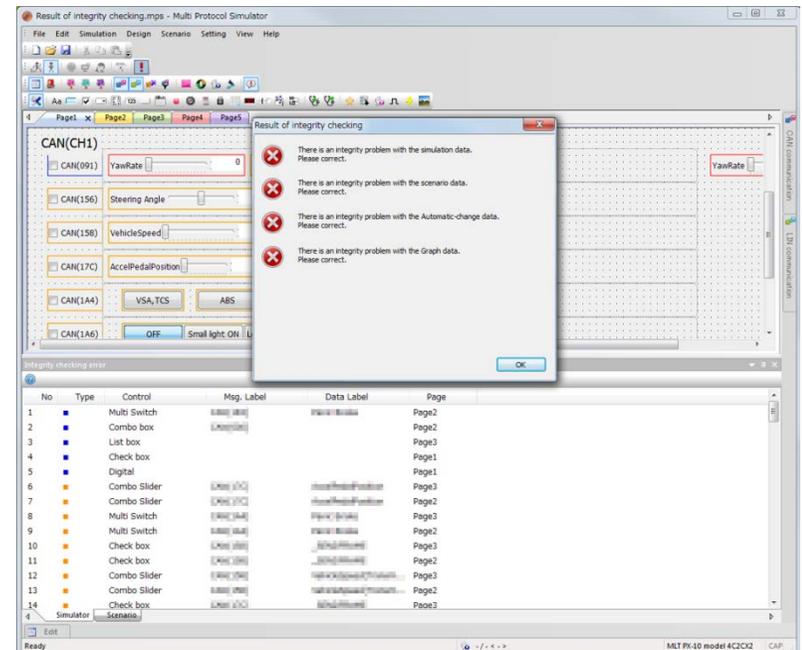
- Displaying frame names and data names of defined BitAssign in tree view.
- Easy setting which just dragging the data name to use and dropping it on the control you want to set.



## ■ Integrity Checking

- Perform integrity checking before simulation is performed.
- The execution timing are two ways when the integrity checking button is pressed down and when the simulation start button is pressed.
- Result of integrity checking display error contents and information on the corresponding control.

Result of integrity checking	If a control with unmatched settings is detected, a warning message which detected screen each is displayed.
Integrity checking error	Display the error level, the name of the target page and the applicable control information etc.
Panel (control)	The applicable control is enclosed with a colored frame.



# Transmit / reception data real time display function

## ■ Graph display function (reception data only)

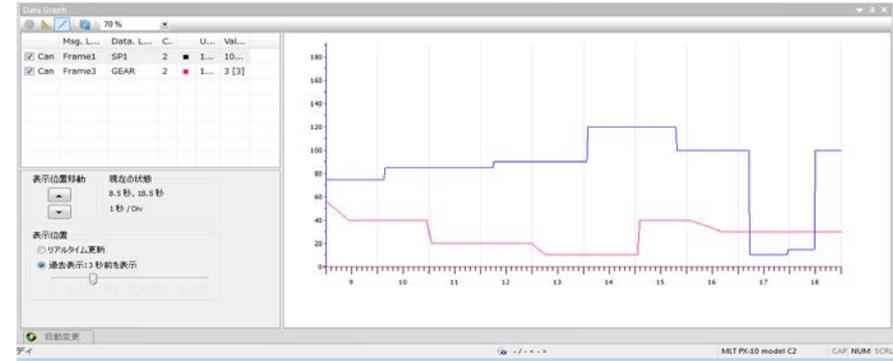
- Up to 10 set of received data can be displayed.
- The display setting is simple operation just by dragging and dropping from the BitAssign data screen to the graph display screen.

## ■ Communication data display function by each protocol

- During communication, all transmitted and received data on the bus is displayed for each protocol.
- If data not set in the control is also registered in the BitAssign, the transmission / reception value is displayed.
- The maximum, minimum and average values of the transmission / reception interval of each frame are displayed
- Physical values and raw values considering “Resolution”, “Offset”, “Sign” of bit assign data are displayed.

## ■ Communication log data recording function (CAN)

- Displaying transmission / reception data which specified channel and frame ID.
- File saving in the CSV format is possible.



<Data Graph screen>

Ch	Msg. Label	ID(hex)	Tx/Rx	Cycle(ms)	Time	Max(ms)	Min(ms)	Avg(ms)	Error Info
2	Frame1	004	Rx	[ 2194]	64.12929	1009.754	29.122	25.250	
1	Frame1	004	Tx	[ 2194]	64.12929	1009.754	29.122	25.250	
2	Frame2	104	Rx	[ 2194]	64.13029	1009.666	29.326	25.250	
1	Frame2	004	Tx	[ 0]	64.13029	1009.666	29.326	25.250	
2	Frame3	30C	Rx	[ 1024]	65.71404	1429.340	42.466	737.248	
1	Frame3	30C	Tx	[ 1024]	65.71404	1429.340	42.466	737.248	
2	Frame4	811	Rx	[ 1000]	63.54737	1812.893	989.143	1033.425	
1	Frame4	811	Tx	[ 1000]	63.54737	1812.893	989.143	1033.425	

<Communication data display screen>

Ch	Tx/Rx	Time	ID(hex)	Length	Data
1	Tx	3.205584	222	8	00 00 00 00 00 00 00
1	Tx	3.205267	111	8	00 00 00 00 00 00 00
1	Tx	3.182589	222	8	00 00 00 00 00 00 00
1	Tx	3.182270	111	8	00 00 00 00 00 00 00
1	Tx	3.180981	222	8	00 00 00 00 00 00 00
1	Tx	3.180285	111	8	00 00 00 00 00 00 00
1	Tx	3.184507	222	8	00 00 00 00 00 00 00
1	Tx	3.184250	111	8	00 00 00 00 00 00 00
2	Rx	3.111270	303	8	00 00 00 00 00 00 00
1	Tx	3.110584	222	8	00 00 00 00 00 00 00
1	Tx	3.110258	111	8	00 00 00 00 00 00 00
1	Tx	3.099590	222	8	00 00 00 00 00 00 00
1	Tx	3.099269	111	8	00 00 00 00 00 00 00
1	Tx	3.062593	222	8	00 00 00 00 00 00 00
1	Tx	3.062265	111	8	00 00 00 00 00 00 00
1	Tx	3.039510	222	8	00 00 00 00 00 00 00
1	Tx	3.039258	111	8	00 00 00 00 00 00 00
1	Tx	3.014576	222	8	00 00 00 00 00 00 00
1	Tx	3.014250	111	8	00 00 00 00 00 00 00
1	Tx	2.309592	222	8	00 00 00 00 00 00 00
1	Tx	2.309272	111	8	00 00 00 00 00 00 00

<Communication log screen>

# Gateway function

- Automatic change function (CAN/LIN/CXPI)
  - Automatically change the transmission value of the control when a specific value is received.
  - It is possible to change the transmission value of more than one control for one reception condition.
  - It is also possible to change the transmission value by calculation.
- Response transmission function (CAN/LIN)
  - Automatically send a specified frame every time a specified data or a frame of a specified pattern are received.
  - Since processing is executed by hardware, it can respond within 1ms.

	Automatic change	Response transmission
Processing method	Software	Hardware
Transmission of the fixed value	possible	possible
Transmission of the calculation value	possible	impossible
Maximum number of settings	none *1	50 cases(CAN) / 100 cases(LIN)
Updating the control display	updated	Not update
Setting contents	Rx : reception frame / reception data / received value Tx : transmission control	Rx : response condition Tx : transmission frame
Setting targets	one to many	one to one
The control settings on page	required *2	possible even without the control

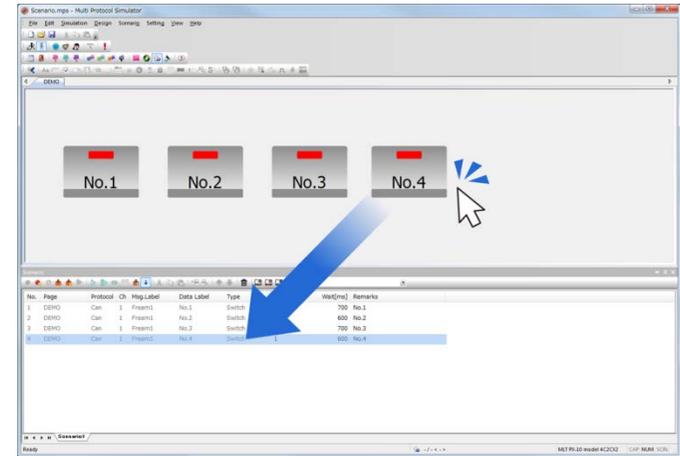
\*1 Depends on PC performance.

\*2 It is necessary to set the control name in a target control.

# Automatic inspection function

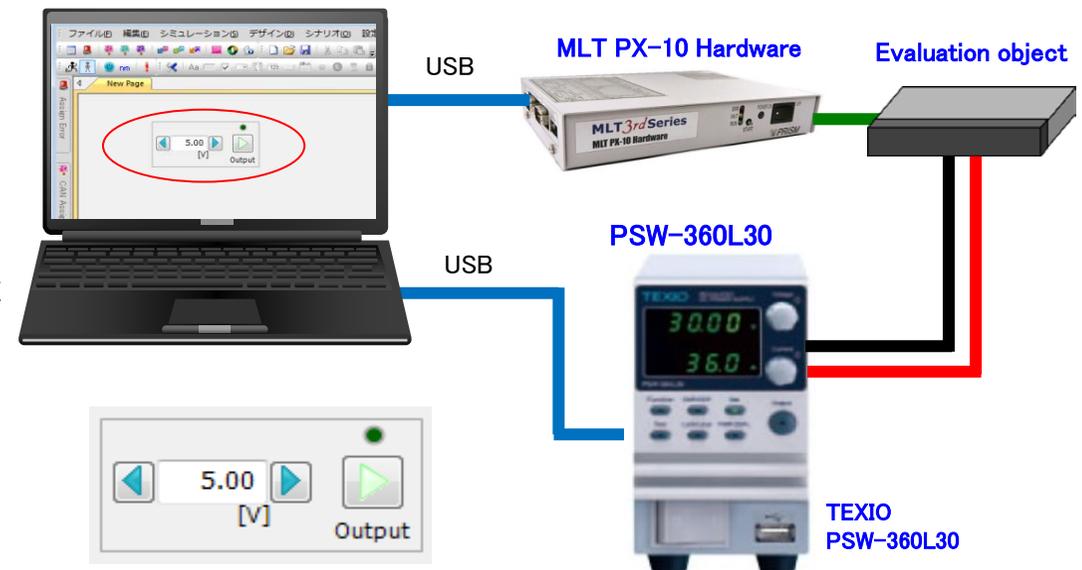
## ■ Scenario function

- This function enables to memorize manual operations in order and replay them.
- Number of executions: 1 to 65535 times or unlimited setting are possible.
- By combining multiple scenario data, complicated inspection patterns can be easily created.
- High quality inspection is realized without depending on operator skills.



## ■ Operation of Stabilization Power Supply

- Support voltage value control of DC stabilized power supply.  
Applicable model : TEXIO PSW-360L30
- A output voltage value, a constant current (CC) and a voltage changing step value can be set.
- By using it with the scenario function, it is possible to automate inspection including the power supply fluctuation.





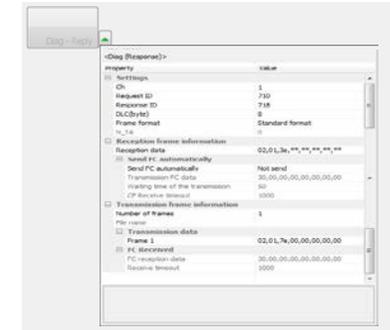
# Enhanced functions

## ■ Diagnostics request / response function

- Support both single-frame and multi-frame, and the transmission data can be set not only on the control but also in an external files (text format and binary format).
- By using it with the scenario function, it is possible to automate inspection including diagnosis.



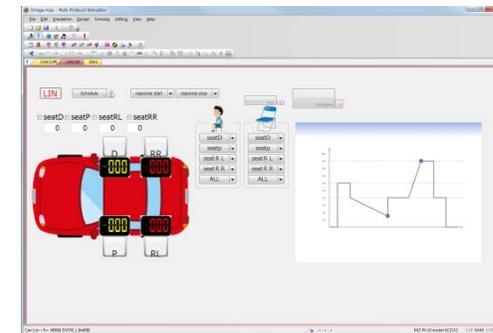
<Request Settings screen>



<Response Settings screen >

## ■ Using images

- Inserting images, tables and descriptions can be easily added.
- Supported format are PNG / BMP / JPEG / GIF.
- By adding figures, descriptions, tables, etc., it is possible to summarize operating procedures, commentary, etc. on the MPS page.



Product customization is possible. Please inquire in detail.