# TOSHIBA

# TOSLINE-S20/S20LP

# S20 Loader (for Windows)

# **User's Manual**

April 2011

**Toshiba Corporation** 

UM-TLS20\*\*-E006

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# **1. Introduction**

This User's Manual describes Toshiba's loader system for the data transmission equipment TOSLINE-S20/S20LP (S-LS for Windows).

Toshiba has developed different S-LS versions for Windows 95, based on the S-LS for DOS. The two S-LS versions meet the TOSLINE-S20 for transmission in bus topology (hereafter called the "TL-S20") and the TOSLINE-S20LP for transmission in loop topology (hereafter called the "TL-S20LP").

# 2. Before Operation

# 2.1 What is the S20 Loader?

The S20 Loader on a personal computer (PC) monitors station conditions, reads/writes control data, and sets up parameters.

As shown in the following figure, the S20 Loader on a PC connects with TL-S20 stations and TL-S20LP stations via an RS-232C cable. The loader sets up and monitors the station with which the loader is connected (local station) and other stations being connected via transmission cable (remote stations). The loader can manage up to 64 stations.



• Main memory 24	MB or more
------------------	------------

• Hard disk space 20 MB or more

# 2.2 TL-S20 (bus topology) Connection and TL-S20LP (loop topology) Connection

<Bus topology connection>



<Loop topology connection>



# 2.3 Installing Your S-LS

The S-LS (for Windows) is provided with the following media:

For Windows 95 (two 2HD floppy disks)

- Setup disk 1/2
- Setup disk 2/2

Install your S-LS by executing SETUP.EXE in setup disk 1/2 in the following way. Insert setup disk 1/2 for Windows 95 into the floppy disk drive. Start  $\rightarrow$  Specify file name to execute  $\rightarrow$  A : ¥SETUP.EXE  $\rightarrow$  OK

After executing SETUP.EXE, follow the instruction appearing in the window.

# 2.4 Operating Procedure

This manual allows you to execute the S20 Loader in the following sequence.



# 2.5 Difference Between the TL-S20 (bus topology) and the TL-S20LP (loop topology)

The following table lists the differences found between the TL-S20 (bus topology) and the TL-S20LP (loop topology) in terms of functions.

○ : Function Yes

 $\times$ : Function No

Function	Detail	Bus topology	Loop topology
1. Station Connection Diagram	Connection Diagram display	$\bigcirc$	0
	Rearrangement	×	0
	Scan Transmission Address List	0	0
2. Setup Information	Scan Transmission Information	$\bigcirc$	0
	Station Control Information	$\bigcirc$	0
	SIF Setup Information	0	$\times$
3. Data Access	Access to Scan Area	0	0
	Access to System Memory Area	0	0
	Access to SIF Memory Area	0	×
	Access to Dual-port Memory Area	$\bigcirc$	0
4. RAS Information	Online Map	0	0
	Scan Healthy Map	0	×
	Loop Map	$\times$	0
	Station Status	0	0
	Station Down Information	0	0
	RAS Counter Information	$\bigcirc$	0
5. Online/Standby	Online Request	0	0
	Standby Request	0	0
6. Test Request	Hardware Test	0	0
	Station Loop-back Test	0	0
7. Communication Environment Setup	Communication Environment Setup	0	0

# 3. Starting Up the Loader

# 3.1 Connecting with a Station

The S20 Loader on a PC connects with a S20 transmission station via an RS-232C cable. This allows the loader to set up and monitor the transmission station and the other remote stations being connected via transmission cable.

Use the following type of transmission cable to connect the 9-pin connector (male) on the PC with the 9-pin connector (female) on the S20 transmission station for LOADER (for the T series connection).

Transmission cable
 Product code
 Specification
 (PC side : male, Station side : female)
 Length : 5 meters

# 3.2 Activating the Loader

Use the RS-232C to connect your PC with a station before activating your S-LS Loader. The loader recognizes the station type (bus topology or loop topology) when activated; An error message will appear when the loader is not connected with the station.

# • Activating the Loader on Windows 95

The S-LS will be activated generally in the following sequence when the installation has been completed successfully.

Start ↓ Program ↓ S-LS loader system for Windows 95 ↓ S-LS loader system for Windows 95

The above operation allows the loader program to get activated to the following communication environment contirmation window appears.

# • Window Image

ant from the		thod U	etail Setti
Port No.	COMM 1	•	
BaudRate	9600 👱	Stop Bit	
Parity	Even 💌	] (°)	1.5
Data Bit	8 👻	C a	2
3-LS tries to co f no change th f change the s	onnect The le settings, Sele	Station by now Select "Contin ect "Change".	v settings. ue''.
f change the s	ettings, Sek	ect "Change".	ue . 1

The communication environment confirmation window is designed for changing connection conditions with stations in future. Therefore, the window is wrrently unavailable. Press the "Continue" button.

This operation allows the system configration diagram (base window) to appear.

# 4. Operation

# 4.1 Station Connection Diagram

# 4.1.1 Standard Size Window

# • The Function

Displays at a glance the types and statuses of the stations being connected. The window can transmit into any of the individual "TOSLINE-S20 Loader System" windows by selecting a station.

# • Window Image



### • The Menu

📲 Station Connections : Loop Type								
File ( <u>F</u> )	Menu ( <u>M</u> )	Option ( <u>O</u> )	Window ( <u>W</u> )	Help ( <u>H</u> )				
<b></b>		<u>.</u>	Ωn					

Individual "TOSLINE-S20 Loader System" windows can be displayed from the menu or the toolbar. Below are the details of the menu. Select an intended station in the Station Connection Diagram window for display and specify the window in the menu or the toolbar.

#### [File]

L . J	
[Display Scan Address List]	Displays the Scan Address List window.
[Display Station Down Information]	Displays Down Information when the local station is downed.
[Save Files All Station's Information]	Saves the setup information of all stations in the file.
[Exit]	Terminates the application.
[Menu]	
[Setting Information]	Displays the Setting Information window.
[Data Access]	Displays the Data Access window.
[RAS Information]	
[Online Map]	Displays the Online Map window.
[Scan Healthy Map]	Displays the Scan Healthy Map window.
[Loop Map]	Displays the Loop Map window.
[Station Status]	Displays the Station Status window.
[Station Down Information]	Displays the Station Down Information.
[RAS Counter Information]	Displays the RAS Counter Information
[Online/Standby Request]	Displays the Online/Standby Request window.
[Test Request]	Displays the Test Request window.
[Option]	
[Station Display Position]	
[Registration]	Registers the display positions of the stations rearranged.
[Display]	Reflects the display positions of the registered stations in the window.
[Normal]	Displays the stations rearranged in the ascending order of smaller display position numbers.
[Communication Environment Setting]	Displays the Communication Environment Setting window.
[Window]	

[Display Small Size].....Displays the Station Connection Diagram in small size.

#### [Help]

[Contents]	Displays the Help window.
[Key Word Seareh]	Displays the Retrieve window in Help.
[Version Information]	Displays the information of the application version.

# • The Toolbar Function

The toolbar has buttons for the functions frequently used. The following buttons are found from left to right.

[Exit button]	Exits the application.
[Setting Information button]	Displays the Setup Information window.
[Data Access button]	Displays the Data Access window.
[RAS Information button]	Displays the RAS Information Menu window.
[Online/Standby Request button]	Displays the Online/Standby Request window.
[Test Request button]	Displays the Test Request window.

# 4.1.2 Small Size Window

The small size window can display up to 64 stations in the 800 x 600 dots resolution. This window has the equivalent functions as the standard size window.

# • Window Image

르蟾Station Connections : Loop Type	- 🗆 ×
File (E) Menu (M) Option (Q) Window (M) Help (H)	
Self Station 'Station No 81 (	Inline
<pre>     Station Connections &gt;  </pre>	

Different types of station icons appear in the window, depending on the station types.

"Setting Information -- Scan Transmission Information" window will appear by double-clicking on a station icon.

# 4.1.3 Transmission Error

One of the following messages boxes will be displayed when an error occurs during the transmission between the TOSLINE-S20 Loader System and the TOSLINE-S20.

Transmit Time Out Receive Time Out Start Code Error End Code Error BCC Error Connection Error Receive Data Length Error RX Text not matched TX Text

Transmission is performed in 2 second cycle between the TOSLINE-S20 Loader System and the TOSLINE-S20. Clicking on the OK button resumes the 2 second cycle transmission when an error occurs.

## 4.1.4 Rearrangement

#### • The Function

The display positions order of stations in the Station Connection Diagram window can be changed. However, this function is limited to the loop topology.

#### • Window Image

Station Connections : Loop Type	e								_ & ×
File (F) Menu (M) Option (O)	Window (W) Help	(H)							
	Ωn							Self Station 1	Station No 81
<pre></pre>									_
		1	×						
	Stn No.04	Stn No.05	Stn No.01	Stn No.02	Stn No.03	Stn No.06	Stn No.U7	Stn No.08	
	Stn No.09	Stn No.10	Stn No. 11	Stn No.12	Stn No.13	Stn No.14	Stn No.15	Stn No.16	
	Stn No.17	Stn No.18	Stn No.19	Stn No.20	Stn No.21	Stn No.22	Stn No.23	Stn No.24	
	Stn No.25	Stn No.26	Stn No.27	Stn No.28	Stn No.29	Stn No.30	Stn No.31	Stn No.32	
	Stn No.33	Stn No.34	Stn No.35	Stn No.36	Stn No.37	Stn No.38	Stn No.39	Stn No.40	
	Stn No.41	Stn No.42	Stn No.43	Stn No.44	Stn No.45	Stn No.46	Stn No.47	Stn No.48	

#### How to Operate

(1) Rearrange the station display positions by inserting the station selected into a desired display position.

Drag the station you want to rearrange while pressing the Shift key.

The moving icon appears.

While pressing the Shift key, move the dragging station to a position where you want to display, and then drop the icon.

The station you dragged appears at the display position you dropped it.

(2) Register the rearranged display position information.

From the menu, select "Option" - ""Station Display Position" - "Registration."

The current station display position information is registered.

Since this time, the Station Connection Diagram window displays the stations in the order of the display positions registered

(3) Return the station display positions to the standard display positions.

From the menu, select "Option" - "Station Display Position" - "Normal."

The stations appear in the ascending order of smaller display position numbers.

# 4.1.5 Scan Address List

#### • The Function

Displays the scan address list of the stations being connected with the system. When an overlapped scan address is found in multiple stations, the address appear colored. This address appears only for the onlined or standby station.

### • Window Image

🚰 Scan Address Map 📃 🗖 🗙									
File( <u>F</u> )									
No.: Kind	Address1	Address2	No.: Kind	Address1	Address2 *				
01:T3H	0000 - 0255	0000 - 0000							
02:T3H	1124 - 1223	0000 - 0000							
03:T3H	0000 - 0199	0000 - 0199							
04:T3H	0200 - 0399	0000 - 0000							
U5:13H	1032 - 1063	0000 - 0000							
L									
l									
l									
L									
I									
L									
J					<u> </u>				
•					F				

#### • How to Operate

(1) Display the Scan Address List window.

From the menu, select "Menu" - "Display Scan Address List." The Scan Address List window appears.

(2) Read the information again.

From the menu, select "File" - "Read." The Scan Address display is updated.

(3) Display the Scan Transmission Information Setting window.

Doubleclick the "No. : Kind" display area in the Scan Address List. The Scan Transmission Information Setting window of the corresponding station appears.

# 4.2 Setting Information

Displaying and setting the parameters of individual stations are available.

However, these operations are available only when the station selected is in standby

mode. The following information can be set.

- (1) Scan Transmission Information
- (2) Station Control Information
- (3) SIF Setting Information

# 4.2.1 Scan Transmission Information

## • The Function

The scan transmission information of the station being selected can be set or displayed.

### • Window Image

Setting Information	X
Station Number(1-64) 05	
Scan Transmission Station G	ontrol
Station Type Send Starting Address 1 Number of Send Words 1	T3H
Number of Send Words 2	
0 K Renew	Cancel

# • Station Type

<Bus topology>

- (1) T4 : T4 station
- (2) T3 : T3 station
- (3) T2 : T2 station
- (4) HTI : Handy terminal interface
- (5) PLC-5 : PLC-5
- (6) PC/AT : PC/AT bus
- (7) SIF : Serial interface
- (8) MDM05 : MDM05
- (9) PC98 : PC9801
- (10) SG : MCR22
- (11) PCS : PCS4000/6000/7000
- (12) VME : VME bus
- (13) CYCLO : TOSCYCLO-u/H850
- (14) U/S : TOSVERT-u/S250
   (15) VF : TOSVERT-VF

For the station undefined, the station type code is displayed

<l00< th=""><th>p topology&gt;</th></l00<>	p topology>
(1) G200H	: G200H station
(2) MCR25	: MCR station
(3) PTLS9	: PCS station
(4) SBL22	: Signal transmission device station
(5) T3H	: T3H station

(6) TS25 : Modem interface

I con tonologue

#### Possible Setup Items

- (1) Transmission top address 1 (TL-S20 : 0~1023) (TL-S20LP : 0~4095)
- (2) Number of transmission words 1  $(0 \sim 1024)$
- (3) Transmission top address 2 (TL-S20 : 0~1023) (TL-S20LP : 0~4095)
- (4) Number of transmission words 2 (0~1024)

#### How to Operate

(1) Setting values

Enter the values of transmission top address 1, number of transmission words 1, transmission top address 2, and number of transmission words 2.(Enter values directly, or select from the combo box or using the spin button)

Click on the "OK" or "Update" button. The data you set is transmitted to the corresponding station.

(2) Canceling the values after setup

Click on the "Cancel" button. The data you set becomes invalid and the Setting Information window disappears.

(3) Selecting a station

Select a station number from the combo box or using the spin button. The window is changed over to the selected station information.

(4) Saving in the file (one corresponding station)

Select "Save As " from the menu or click on the "Save As " button in the upper-right corner of the window.

A dialog box appears for specifying a file name to be saved.

Set up the path of the file name to be saved in the dialog box. The setup information file of the corresponding station is output to the path specified.

(5) Reading from the file (one corresponding station)

Select "Read File" from the menu, or click on the "Read File" button in the upper-right corner of the window.

A dialog box appears for specifying a file name to be read.

Set up the path of the file name to be red in the dialog box.

From the path specified, the setup information of the corresponding station is read and displayed.

# 4.2.2 Station Control Information

### • The Function

The station control information of the station being selected can be set and displayed.

# • Window Image

Scan Transmission	n Gentrel
Scan Transmission	Message Transmission
© Enable	© Enable
© Disable	© Disable
Scan Access	Target Scan Time
© 1 W	61.4 T msec
© 2 W	Start with Standby mode
0 K Rene	Cancel

# • Possible Setup Items

- (1) Inhibits/allows scan transmission
- (2) Number of scan access words (1W/2W)
- (3) Inhibits/allows message transmission
- (4) Target cycle time

unit: msec

3.07	4.10	5.12	6.14	7.17	8.19	9.22	10.2	11.3	12.3
13.3	14.3	15.4	16.3	20.5	24.6	28.7	32.8	36.9	41.0
45.1	49.2	53.2	57.3	61.4					

(5) Standby startup (yes/no)

#### • How to Operate

(1) Setting inhibit/allow scan transmission, number of scan access words, inhibit/allow message transmission, and standby startup (check box)

Select either of the values in the window

Click on the "OK" or "Update" button. The data you set is transmitted to the corresponding station.

(2) Setting a target cycle time

From the combo box, select the target cycle time you want to set.

Click on the "OK" or "Update" button. The data you set is transmitted to the corresponding station.

(3) Canceling the values after setup

Click on the "Cancel" button. The data you set becomes invalid and the setup information window disappears.

(4) Selecting a station

Select a station number from the combo box or by using the spin button. The widow is changed over to the selected station information.

(5) Saving in a file (one corresponding station)

Select "Save As ..." from the menu, or click on the "Save As .." button in the upper-right corner of the window.

A dialog box appears for specifying a file name to be saved.

Set up the path of the saving file name in the dialog box. The setup information file of the corresponding station is output to the path specified.

(6) Reading from the file (one corresponding station)

Select "Read File" from the menu or click on the "Read File" in the upper-right corner of the window.

A dialog box appears for specifying a file name to be read.

In the dialog box, set up the path of the file name to be read.

From the path specified, the setup information of the corresponding station is read and displayed.

# 4.2.3 SIF Setting Information

#### • The Function

The SIF setting information of the station selected can be set and displayed. This function is available for the TL-S20 (bus topology) only.

#### • Window Image

Setting Information
Menu (M) File Operation ( <u>F</u> )
Station Number(1-64) 01
Scan Transmission Station Control SIF Setting
Port Select   Port 1  Port 2
BaudRate 9600 V V Even Parity
Stop Bit Length     Data Bit Length     Flow Control       Image: One of the state of the s
Transmission Type
Message Transmission 💌 Address FV 🗮
-Virtual Circuit
Target Port None Target Station 0
0 K Renew Cancel

#### • Possible Setup Items

Set the information by ports (port 1/port 2)

- (1) Baud rate (300, 600, 1200, 2400, 4800, 9600, 19200) BPS
- (2) Data length (7, 8) bits
- (3) Stop bits (1, 2) bit
- (4) Parity bit (none, odd parity, even parity)
- (5) Yes/No of flow control
- (6) Transmission type (message transmission, free-run/broadcast)
- (7) Virtual Circuit target station (none, 1 to 64)
- (8) Virtual Circuit target port (none, 1, 2)
- (9) Multicast address (none, 0 to 9)

#### • How to Operate

(1) Selecting a port to be set up

Select a port (port 1/port 2) you want to set up on the window. The setup information for the port selected appears.

(2) Setting up individual items information

Change individual items information on the window.

Click on the "OK" or "Update" button. The data you set is transmitted to the corresponding station.

(3) Canceling the values after setup

Click on the "Cancel" button. The data you set becomes invalid, and the Setting Information window disappears.

(4) Selecting a station

Select a station number from the combo box or using the spin button. The information of the station selected appears.

(5) Save in a file (one corresponding station)

Select "Save As ..." from the menu or click on the "Save As .." button in upper-right corner of the window.

A dialog box appears for specifying a file name to be saved.

Set up the path of the file name to be saved in the dialog box. The setup information file of the corresponding station is output to the path specified.

(6) Reading from the file (one corresponding station)

Select "Reading File" from the menu, or click on the "Read File" button in upper-right corner of the window.

A dialog box appears for specifying a file name to be read.

Setup the path of the file name to be read in the dialog box.

The setup information of the corresponding station is read from the file specified for display.

# 4.2.4 Saving All Station's Information

### • The Function

Currently, all of the setting information of the individual stations being connected with the system can be saved.

- (1) Scan transmission information
- (2) Station control information
- (3) SIF unit setup information

### Window Image



#### • How to Operate

From the menu, select "File" - "Save Files All Stations's Information" in the Station Connection Diagram.

A dialog box appears for specifying a saving directory.

Set a saving directory name in the dialog box.

The Setting information file of the individual stations is output onto the directory specified.

# 4.3 Data Access

Reading and writing are available for the scan memory of the stations being connected. Specify a station number and the top address to access the scan area.

The data display format in decimal or hexadecimal notation can be selected.

The data at the same address can be read out periodically (2 second cycle) for display by checking "Cyclic Data Read."

Scan data can be read and written to/from a file.

## • Window Image

🚰 Data Access									×			
Menu( <u>M</u> ) File	Operat	ion( <u>F</u> )										
				Data Display Format Decimal								
-< Data A	ccess	Menu >										
Scan D	Scan Data Access 💌 Execute											
Station N	Station Number (1 - 64) 02 Vit											
Starting	Address	: (0	- 40.95 )	ο	000 🔽	<b>≜</b>						
Number of	Read [	)ata Word	is (1	- 16)	16 💌	🖣 🗌 Су	clic Da	ta Reac				
	0	1	2	3	4	5	6	7				
[0000]	0	0	0	0	0	0	0	0				
[0008]	0	0	0	0	0	0	0	0				
				Return								

# 4.3.1 Access to Scan Area

#### • The Function

The scan area of the stations being selected can be set and displayed.

### • Window Image

💇 Data Access	×
Menu( <u>M</u> ) File Operation( <u>F</u> )	
Data Display Format Decimal	
<pre>&lt; Data Access Menu &gt;</pre>	
Scan Data Access Execute	
Station Number (1 - 64) 01	
Starting Address (0 - 4095) 0000	
Number of Read Data Words (1 - 16) 16 💌 🖨 🗖 Cyclic Data Read	
Return	

### How to Operate

(1) Displaying values

Set the station number, top address, number of words to be read in the data access menu.

Click on the "Execute" button The data of the station selected appears.

(2) Continuous data read

Check the check box for "Cyclic Data Read" in the window, and click on the "Execute" button. The data at the same address is read periodically (2 seconds cycle) for display.

(3) Changing the data display format

Click on the "Decimal" or "Hexadecimal" button in the window.

The data display format is changed over to the one specified (display on the button is in current format).

(4) Setting values (during "Cyclic Data Read" no setup operation is available)

Click on the data you want to set.

Change the data you want to set.

Click on the "Data Write" button.

The data changed is sent to the corresponding station.

#### (5) Saving data in a file

While the data is being displayed in the window, select "File Operation" – "Save As ... " from the menu, or click on the "Save As ... " button in the window.

A dialog box appears for specifying a file name to be saved.

Specifying a file name in the dialog.

The data being displayed is output onto the file name specified.

(6) Reading the data in a file

Select "File Operation" – "Read from File" from the menu. Or click on the "Read File" button in the window.

A dialog box appears for specifying a file name to be read.

Specifying a file name to read in the dialog.

Data is read from the file specified for display.

• Window Image (Data display status)

🎬 Data Access							×						
Menu( <u>M</u> ) File Operation( <u>F</u> )													
	Data Display Format Decimal												
_≺ Data Access Menu ≻—													
Scan Data Access	Scan Data Access 💌 Execute												
Station Number (1 - 64)			01 💌	<b>≜</b>	Data W	rite							
Starting Address (0 -	4095)	<u>loc</u>	000 🔽	<b>≜</b> ▼									
Number of Read Data Words	(1	- 16)	16 🔻	🖨 🗖 Су	clic D≋	ita Read							
0 1	2	3	4	5	6	7							
<u>[0000]</u> 0 0	0	0	0	0	0	0							
0 0	0	0	0	0	0	0							
		Return											

• Window Image (Dialog for specifying a file name)

File Open	?	×
Look <u>i</u> n:	🔄 Sis32 🔽 💽 🖆 🔛	
exe1113		
Exell14		
		- 1
File <u>n</u> ame:	<u>O</u> pen	
Files of <u>type</u> :	Scan Data Inf. Save File(*.DT1)	
	Open as <u>r</u> ead-only	

# 4.4 RAS Information

The RAS information generated in station is read.

When the RAS information on the toolbar in the Station Connection Diagram window is clicked on, the RAS Information menu appears.

By selecting a window you want to display from the RAS Information menu, the window appears.

The RAS Information has the following six types of windows.

- (1) Online Map Displays the connection status of individual stations.
- (2) Scan Healthy Map(not found in the TL-S20LP (loop topology)) Displays execution status of scan transmission by the word in the scan area.
- (3) Loop Map (not found in the TL-S20 (bus topology)) Displays the loop status of individual stations.
- (4) Station StatusDisplays the station status of any arbitrary stations.
- (5) Station Down Information Reads the cause of the down from the station downed for display.
- (6)RAS Counter Information

Displays the RAS counter information of any arbitrary stations.

# 4.4.1 Online Map

# • The Function

Displays the connection status of a station, which is read in 3-second interval from the station.

# • Window Image

Onli	ne M	ap >	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
	1	1	1	1	1	1	1	1	1			1	1	1	
Onli	ne M	lode		<mark>0</mark> : S	tand	Бу М	ode	N	lo Ma	rk:0	ffli	ne o	r No	Sta	rti

(Blue) : Online mode.

(Red) : Standby mode.

# • How to Operate

Select Online Map from the RAS Information menu. The Online Map window appears.

# 4.4.2 Scan Healthy Map

## • The Function

Displays the execution status of scan transmission by the word in the scan area. The status is read in 3 seconds cycle for display from the station. This function is not found in the TL-S20LP (loop topology).

## • Window Image

can Health ( <u>F</u> ) Menu	у Ма ( <u>М</u> )	P														
<pre>&lt; Scan Healthy Map &gt; Starting Address 0000  Page Up Page Down</pre>																
	1	2	3	4	5	6	- 7	8	9	10	11	12	13	14	15	16
[0000]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0016]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0032]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0048]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0064]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0080]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0096]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0112]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0128]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0144]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0160]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0176]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0192]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0208]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0224]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
[0240]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0 :Scan 0 :Scan	Data Data	a Nor a Upo	'mal Jatir	Upda ng St	atine toppe	ç ≥d				Retu	rn					

[] (Blue) : Scan data is normally updated.

(Red) : Scan data is not updated.

# • How to Operate

Select Scan Healthy Map from the RAS Information menu. The Scan Healthy Map window appears.

# 4.4.3 Loop Map

# • The Function

The loop statuses of individual stations are displayed. This function is not found in the TL-S20 (bus topology).

# • Window Image

🔆 Loop I	Мар															×
C Loop	Мар >	,														
	2	3 (	4	5	6	7	8	9	10	11	12	13	14	15	16	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
: Te : Te : Ge	ermin ermin enera	ial (C ial (E il (En	ut o Ind 2 Id 2)	(ff) )	ШQ	:Te :Ge	rmin nera	ial (T il (Th No M	hrou iroug ark	⊫gh) (h) : Of⊓	flin	:T :G e or	ermii ener No	nal ( al (E Stat	End 1 nd 1) ion	D
							Ret	urn								

• Status Types

No.	Loop status mode	Station type	Display mark	Color
1	Cut off	Terminal station		Yellow
2	Trough	Terminal station		Light blue
3	End1	Terminal station		Purple
4	End2	Terminal station		Green
5	Trough	General station	$\bigcirc$	Light blue
6	End1	General station	$\bigcirc$	Yellow
7	End2	General station	$\bigcirc$	Purple

End1: Loop 1 side transmission disabled / Loop 2 side reception disabled. End2: Loop 2 side transmission disabled / Loop 1 side reception disabled.

#### How to Operate

Select Loop Map from the RAS information menu. The Loop Map window appears.

# 4.4.4 Station Status

#### • The Function

Reads and displays the station status of the station specified.

# • Window Image

Station Status		×
Station Number ( 1	- 64 ) 01 - V	Status Display
Stn No.01	ltem	Details
	Online Status	Online
	Master/Slave	Master
	Scan Transmission	Enable
	Test	No Execution
	External Equipment 1	Error/No Connect
	External Equipment 2	Error/No Connect
	Note) External Equ only for Slf	uipment 2 is valid <sup>5</sup> Station .
	Return	

#### • Display Items

- (1) Online status (online, offline, standby)
- (2) Master station / Slave station mode
- (3) Scan transmission inhibit/allow (inhibit, allow)
- (4) Test (execute, not execute)
- (5) External device 1 (normal, abnormal/ not connected)
- (6) External device 2 (normal, abnormal / not connected)

The loop topology version has the following additional items:

- (5) RCV1: TX2 status (allow, inhibit)
- (6) RCV2: TX1 status (allow, inhibit)
- (7) Loop status (Cut-off, Through, End1/2)

# 4.4.5 Station Down Information

#### • The Function

Reads and displays the down cause of the station being downed.

This function is used by directly connecting the S20 loader with the station being downed.

Another station in the network cannot read the status information of the station being downed.

### • Window Image

🖳 Station Down Information	×
<pre>Station Down Information &gt;</pre>	-1
Station Number (1 - 64) 00 Down Information	
60H : Hardware Error	
Return	

#### • Down Messages

- (1) 10H : Watch Dog Timer Error
- (2) 20H : Memory Bus Error
- (3) 30H : SIF malfunction
- (4) 40H : Jabber Timeout
- (5) 60H : Hardware Error
- (6) 67H : SIF Initializing Error
- (7) 77H : Receive Buffer Overflow
- (8) For the unknown code: error codes and "Undefined Down Code"

The following message box appears when the station specified is normal.

Station Do	own Information 🛛 🔣
•	Online Mode. Confirm. Click ~OK~ Button.
	<u>ОК</u>

# 4.4.6 RAS Counter Information

#### • The Function

Displays the RAS Counter Information of the corresponding station.

# • Window Image

RAS Counter Display File(E) Operate(C) Station Number(1-64) OI Network Information Entering In The Wetwork 1 Times Getting Out The Network 0 Times Network Error 0 Times	Station Information Station Type T3H ROM Rev. 06 Release date (Year) 1996 Year Release date (Month) 12 Month Release date (Day) 05 Day BCC_L 3F BCC_H 60
Clear Counter	Return Cyclic Reading

# • Display Items

Network Information (clear allowed)

Station information (clear inhibited)

Entering In The Network

Getting Out The Network

Network Error

ROM Rev.

Station type

Date of creation

Block check code (BCC\_L, BCC\_H)

# • How to Operate

(1) Displaying the RAS Counter Information window

Select RAS Counter Information from the RAS Information menu. The RAS Counter Information window appears.

(2) Cyclic reading information

Check "Cyclic Reading" in the check box in the window. RAS Counter Information is read cyclically (2 seconds) for display.

(3) Clearing information in the RAS counter

Select "Operate" - "Clear Counter" from the menu. A message box appears to confirm the execution of clearing the information.

Click on "OK" in the Confirm message box. RAS Information Counter is cleared.

# 4.5 Online/Standby Request

# 4.5.1 Online/Standby Request

# • The Function

An "Online Request" or "Standby Request" is issued for the station selected.

This request is always available for the local station (where the S20 loader is connected). For the other stations, this function is available when the local station is onlined or in standby.

# • Window Image

₩Online/Standby Request Menu(M) Option(O)	×
Station Number(1-64)	01 V Request Designation
	<pre>     Request Type &gt;     Online Request     Onl</pre>
	Execute

# • Operation

(1) Online/Standby request to a station selected

Select the station number.

Select the request type.

Click on "Execute" button

The request selected is issued for the station selected.

(2) Online/Standby request for multiple stations

Select "Option" – "Operate Multiple Stations" from the menu. A window for operating multiple stations appears.

🙀 Online/Standby Request	×
Menu(M) Option(Q) Request Multi Stations Connected Station Stn No.01 Stn No.02 Stn No.03 Stn No.04 Stn No.05	<pre>     Request of Multi Stations &gt;     On line Request     O Standby Request </pre>
	Execute
	Return

Select the stations you want to request.

The stations selected appear reversed.

🙀 Online/Standby Request		×
Menu( <u>M</u> ) Option( <u>O</u> ) -Request Multi Stations - Connected Station Stn No.01 Stn No.02 Stn No.03 Stn No.03 Stn No.04 Stn No.05	<pre>     Request of Multi Stations &gt;     Online Request     Online Request     O Standby Request </pre>	
	Execute	

Select a request type.

Click on the "Execute" button

The request selected is issued for the multiple stations selected.

# 4.6 Test Request

#### • The Function

Hardware test:

Checks the ROM area, setup switch, and the station for the appropriateness (for the local station only).

Hardware test is available in standby mode only.

Note:Separate the station from the other stations. Otherwise, some of them may get malfunctioned.

Station loop back test:

Transmits data between the local station and the station specified.

#### Window Image

Test Request	×
<pre>&lt; Test Type &gt;</pre>	
Stn No.02       Station Number (1-64)         Stn No.03       Target Station         Stn No.04       Target Station         Stn No.05       Test Count:         Execute	
Return	

#### • Operation

(1) Hardware test

Select the station you want to test.

Select a request type for hardware test.

Click on the "Execute" button.

The following Confirm window appears.



Click on the "OK" button.

A hardware test is executed.

(2) Station loop back test

Test Request	×
<pre>&lt; Test Type &gt;</pre>	
Stn No.02         Stn No.03         Stn No.04         Stn No.05         Target Station         O2 Image: Station         O2 Image: Station         O2 Image: Station         O2 Image: Station         Image: Station         O2 Image: Station         Image: Stat	
Return	

Select a request type for station loop back test.

Select a station you want to test.

Enter the number of the test times.

Click on the "Execute" button. A Confirm window will appear.

Click on the "OK" button.

A station return test is executed.

😃 Test Execu	uting		×
PÅ	Test Executing. Test Count : Break	6	

Click on the "Break" button when suspension is necessary.

A station return test is breaked.

# 4.7 Communication Environment

# • The Function

Sets up the communication environment for the "TOSLINE-S20 Loader System."

Except for setting up the "communication port" in the following (1), special key operation is required. While pressing the Ctrl key, click on the icon at the upper-left in the Communication Environment Setup window for unlocking.

### • Window Image (environment setup)

S Commu	Environment Setting
	Port No. COMM 1  BaudRate 9600  Parity Even  Control 1 C
	0 K Gancel

# • Setup Items

- (1) Communication port ( <u>COMM 1</u> to COMM 16 )
- (2) Baud rate (1200, 2400, 4800, 9600, 19200) BPS
- (3) Parity (none, odd parity, even parity)
- (4) Data length ( $7, \underline{8}$ ) bits
- (5) Stop bit (<u>1</u>, 1.5, 2) bits

The underline data indicates the default setting.

• Window Image (how to communicate)

🍓 Comm	unication Environment Setting
ł	Environment <b>Method</b> Detail Setting
	Receive Buffer Size 1024 Byte
	Length of Read String 0 Byte
	Transmit Buffer Size 512 Byte
	Substituted Character at Parity Error 🤋
	NULL Transmit Enable False
l	
	0 K Cancel

# • Setup Items

- (1) Receive buffer size (1024)
- (2) Character string size to be read ( $\underline{256}$ )
- (3) Transmit buffer size (512)
- (4) Replacement Character on parity error  $(\underline{?})$
- (5) Whether Null is transferred to the receive buffer (True, False)

The underlined data indicates the default setting.

• Window Image (detailed setup)



# • Setup Items

- (1) Whether DTR line is set to active or not ( True, <u>False</u> )
- (2) Whether RTS line is set to active or not (<u>True</u>, False)
- (3) Setting handshaking ( XON/XOFF, CTS/RTS )
- (4) Occurrence interval of reception OnCom event ( $\underline{1}$  to 256) per character
- (5) Occurrence interval of transmission OnCom event ( $\underline{1}$  to 256) per character

The underlined data indicates the default setting.

# 5. Termination

Terminate the S20 Loader from the menu or the toolbar.

# Menu

ª <b>∰</b> Station	Connection	ns : Loop Typ	e	
File ( <u>F</u> )	Menu ( <u>M</u> )	Option ( <u>O</u> )	Window ( <u>W</u> )	Help ( <u>H</u> )
		<b>X 🔛</b> 🥅	Ωn	

[File]

[Exit].....Exits the application.

# • Toolbar

[Exit button] (button at left end) ......Exits the application.

# Appendix

- 1. Newly supports Windows 7 (32-bit)
- English version works only by English OS. In Japanese OS, it doesn't work.
- The following are recommended system requirements of S-LS for windows.

CPU : 1GHz or faster processor

Memory : 1GB or more

Free HDD : 2GB or more

- When installing in the Windows 7, the Administrator authority is necessary.

- When the message box "Version Conflict" displays at installation, "YES" is clicked.

- When help is displayed, "Windows Help program (WinHlp32.exe) for Windows 7" is downloaded from the homepage of Microsoft and installed.

- < Downloading procedure >
- 1) Following HP is displayed by Internet Explorer.

Microsoft Download Center (http://www.microsoft.com/downloads/en/default.aspx)

- 2) "WinHlp32.exe" is input, and the search is executed.
- 3) "WinHlp32.exe for Windows 7" of the search result is clicked.
- 4) [Continue] button in the screen is pushed, and it moves to the download page.

🗿 Dow	nload details: Win	dows Help program (W	inHlp32.exe) for Windows	7 - Microsoft Internet Explorer	
Eile E	dit ⊻iew F <u>a</u> vorites	<u>⊺</u> ools <u>H</u> elp			an a
G Ba	ck 🕶 🕥 - 💌	📓 🏠 🔎 Search	🛧 Favorites 🕢 🔗	실 🔜 🚳	
Address	Attp://www.micros	oft.com/downloads/en/detail	s.aspx?FamilyID=258aa5ec-e3d9	-4228-8844-008e02b32a2c	So Links 🎽
					United States Change   All Microsoft Sites
Mi	crosoft <sup>®</sup> Dow	nload Center			unload Categories- Ruy New- Hele-
_			Downloa	ds A-Z Product Painines boy	
				biog 0	
		Sei	arch All Download Center	OING D A Meb	
	Windows	s Help progran	n (WinHip32.ex	e) for Windows /	🐉 Windows
	Brief Descri	ntion		On this page	
	Brief Bessi	ption			-
	WinHlp32.exe is req	uired to display 32-bit Help fil	es that have the ".hlp" s 7. you need to install	<u>Quick Details</u>	Mindows Azure
	this application.	To view and rice on window	s 7, you need to instail	Overview     System Requirements	
				♦ <u>System requirements</u> ↓ Instructions	
				4 Additional Information	
				↓ <u>Related Resources</u>	
				What Others Are Downloading	CONT
	Validation R	lequired			APPLICATIONS
					ON DEMAND.
	For more information	n about the validation proces	s <u>click here</u>		
	File Name:		Size:		THAT'S
	Windows6.1-KB9176	607-x64.msu 😾	702 Ki	3 Continue	CLOUD
	Windows6.1-KB9176	607-x86.msu 😾	688 KI	3	POWER.
<b>e</b>					🤣 Internet

\* The confirmation of genuine Windows might be demanded.

Confirm it according to the instruction of the screen.

5) The file of 32 bit version is downloaded on the download page.

Download details: Windows Help program (WinHlp32.exe)	for Windows 7 - I	Aicrosoft Internet Explorer 🔳	
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp			<b>*</b>
G Back 🔹 🕥 - 💌 🗟 🏠 🔎 Search 🤺 Favorites	🚱 🔗 🎍	2 🔁 🔏	
Address 🚳 http://www.microsoft.com/downloads/en/details.aspx?familyId=	258aa5ec-e3d9-4228	8844-008e02b32a2c&ha 💌 🔁 Go 🛛 Lir	nks »
			^
File Name:	Size:	Download files below	
Windows6.1-KB917607-x64.msu 🐝	702 KB	Download	
Windows6.1-KB917607-x86.msu 🐝	688 KB	Download	
Quick Details			~
			>
E Done		🌍 Internet	:

Download file name (32 bit version): Windows6.1-KB917607-x86.msu

6) The file is opened and the setup begins.

File Down	load
Do you	want to open or save this file?
R.	Name: Windows6.1-KB917607-x86.msu Type: Microsoft Update Standalone Package, 687KB From: download.microsoft.com
2	While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. <u>What's the risk?</u>

\* When PC cannot hook up to the Internet

The above-mentioned file is preserved with PC that can be connected with the network, and the file is executed with installed PC(Windows 7).