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April 1st, 2010
Renesas Electronics Corporation

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April 1, 2003

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SH7750R E8000S Emulator

Diagnostic Program Manual

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READ FIRST

- **READ this user's manual before using this emulator product.**
- **KEEP the user's manual handy for future reference.**

Do not attempt to use the emulator product until you fully understand its mechanism.

Emulator Product:

Throughout this document, the term "emulator product" shall be defined as the following products produced only by Hitachi, Ltd. excluding all subsidiary products.

- Emulator station
- Device control board
- EV-chip board
- User system interface cable

The user system or a host computer is not included in this definition.

Purpose of the Emulator Product:

This emulator product is a software and hardware development tool for systems employing the Hitachi microcomputer HD6417750R (hereinafter referred to as SH7750R). By exchanging the device control board and EV-chip board, this emulator product can also be used for systems using Hitachi microcomputers supported by other E8000S-series emulators. This emulator product must only be used for the above purpose.

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Target User of the Emulator Product:

This emulator product should only be used by those who have carefully read and thoroughly understood the information and restrictions contained in the user's manual. Do not attempt to use the emulator product until you fully understand its mechanism.

It is highly recommended that first-time users be instructed by users that are well versed in the operation of the emulator product.

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Figures:

Some figures in this user's manual may show items different from your actual system.

Limited Anticipation of Danger:

Hitachi cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this user's manual and on the emulator product are therefore not all inclusive. Therefore, you must use the emulator product safely at your own risk.

SAFETY PAGE

READ FIRST

- **READ** this user's manual before using this emulator product.
- **KEEP** the user's manual handy for future reference.

Do not attempt to use the emulator product until you fully understand its mechanism.

DEFINITION OF SIGNAL WORDS



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTE emphasizes essential information.

WARNING

Observe the precautions listed below. Failure to do so will result in a FIRE HAZARD and will damage the user system and the emulator product or will result in PERSONAL INJURY. The USER PROGRAM will be LOST.

- 1. Carefully handle the emulator product to prevent receiving an electric shock because the emulator product has a DC power supply. Do not repair or remodel the emulator product by yourself for electric shock prevention and quality assurance.**
- 2. Always switch OFF the emulator product and user system before connecting or disconnecting any CABLES or PARTS.**
- 3. Always before connecting any CABLES, make sure**
 - that pin 1 on both sides are correctly aligned.**
- 4. Supply power according to the power specifications and**
 - do not apply an incorrect power voltage.**
 - Use only the provided power cable.**

Warnings on Emulator Usage

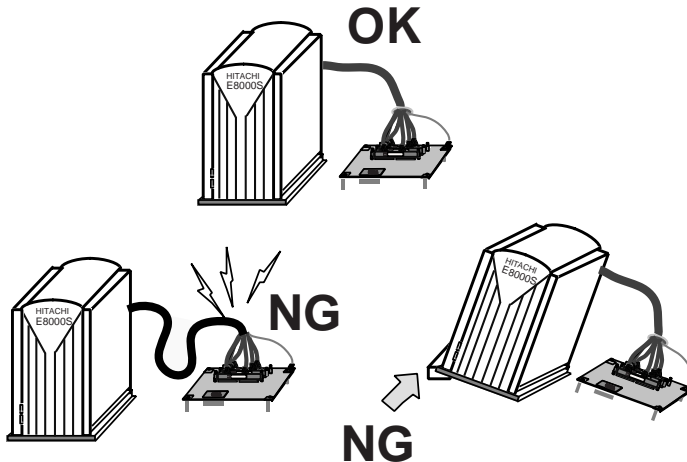
Warnings described below apply as long as you use this emulator. Be sure to read and understand the warnings below before using this emulator. Note that these are the main warnings, not the complete list.

WARNING

Always switch OFF the emulator and user system before connecting or disconnecting any CABLES or PARTS. Failure to do so will result in a FIRE HAZARD and will damage the user system and the emulator product or will result in PERSONAL INJURY. The USER PROGRAM will be LOST.

WARNING

Place the emulator station and EV-chip board so that the trace cables are not bent or twisted. A bent or twisted cable will impose stress on the user interface leading to connection or contact failure. Make sure that the emulator station is placed in a secure position so that it does not move during use nor impose stress on the user interface.



Preface

Thank you for purchasing the E8000S emulator for Hitachi's original microcomputer SH7750R.

The diagnostic program automatically checks whether the E8000S emulator is operating correctly. Read this manual and understand it before using the diagnostic program.

CAUTION

Read section 3, Preparation before Use in the SH7750R E8000S Emulator User's Manual before using the emulator product. Incorrect operation or connection will damage the user system, the emulator product, and the user program.

The emulator is an efficient software and hardware development tool for systems based on Hitachi microcomputer SH7750R. By exchanging the device control board and the evaluation chip board, this emulator can also be used for systems using other microcomputers. The emulator is operated by using the Hitachi Debugging Interface (hereafter referred to as HDI). This interface program is supported by Windows[®] 98, Windows[®] Me, Windows NT[®] 4.0, and Windows[®] 2000*.

Note: The PC interface Board (HS6000EII01H) are not supported by Windows[®] Me, Windows[®] 2000.

Related Manuals:

Description Notes on Using the PC Interface Board (HS6000EII01H)

Description Notes on Using the PC Card Interface (HS6000EIP01H) for the E6000/E8000 Emulator

Description Notes on Using the PCI Interface Board (HS6000EIC01H) for the E6000/E8000 Emulator

Description Notes on Using the PCI Interface Board (HS6000EIC02H) for the E6000/E8000 Emulator

Description Notes on Using the LAN Adapter (HS6000ELN01H) for the E6000/E8000 Emulator

Hitachi Embedded Workshop User's Manual

SuperH[™] RISC engine C/C++ Compiler User's Manual

SuperH[™] RISC engine Assembler User's Manual

H Series Linkage Editor, Librarian, Object Converter User's Manual

Hitachi Debugging Interface User's Manual

Hardware Manual supporting each MPU

Programming Manual supporting each MPU

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2. Windows[®] 98 is an abbreviation for Microsoft[®] Windows[®] 98 operating system.

3. Windows[®] Me is an abbreviation for Microsoft[®] Windows[®] Me operating system.

4. Windows[®] 2000 is an abbreviation for Microsoft[®] Windows[®] 2000 operating system.

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Section 1 Overview

1.1 Purpose

This diagnostic program is used to automatically troubleshoot and maintain a SH7750R E8000S emulator (hereinafter referred to as the E8000S emulator) hardware system. When an error indicating a failure in the emulator occurs, execute the diagnostic program according to this manual.

The diagnostic program is on a CD-R (HS7750REBH81SR).

- Notes:
1. This diagnostic program is not capable of finding all failures possible to occur in the E8000S emulator.
 2. If execution results of the diagnostic program indicate a failure in the E8000S emulator, inform a Hitachi sales agency of the test results in detail.
 3. Hitachi makes no warranties for an E8000S emulator that has been taken apart, repaired, or remodeled by the user based on the test results of the diagnostic program.
 4. In addition to this diagnostic program, run the emulator internal system test described in section 5, Troubleshooting, in the SH7750R E8000S Emulator User's Manual.

Section 2 Configuration

2.1 Test System Configuration

Components required for diagnostic program execution are shown in table 2.1, and the test system configuration is shown in figure 2.1.

Table 2.1 Test System Components

Components		Remarks
E8000S emulator (HS8000EST11H)	Device control board (HS7750EDD81H)	Always necessary
	Trace board (HS8000PWB20H)	Always necessary
	Control board (HS8000PWB81H)	Always necessary
	PC I/F board (HS8000PWB85H)	Always necessary
EV-chip board (HS7750REBH81H)		Always necessary
Memory board (HS8000EMS01H)		Optional
PC interface board (ISA bus interface, PCI interface, PCMCIA interface, or LAN adapter)		Always necessary
Host computer		Always necessary
CD-R (HS7750REBH81SR)		Always necessary

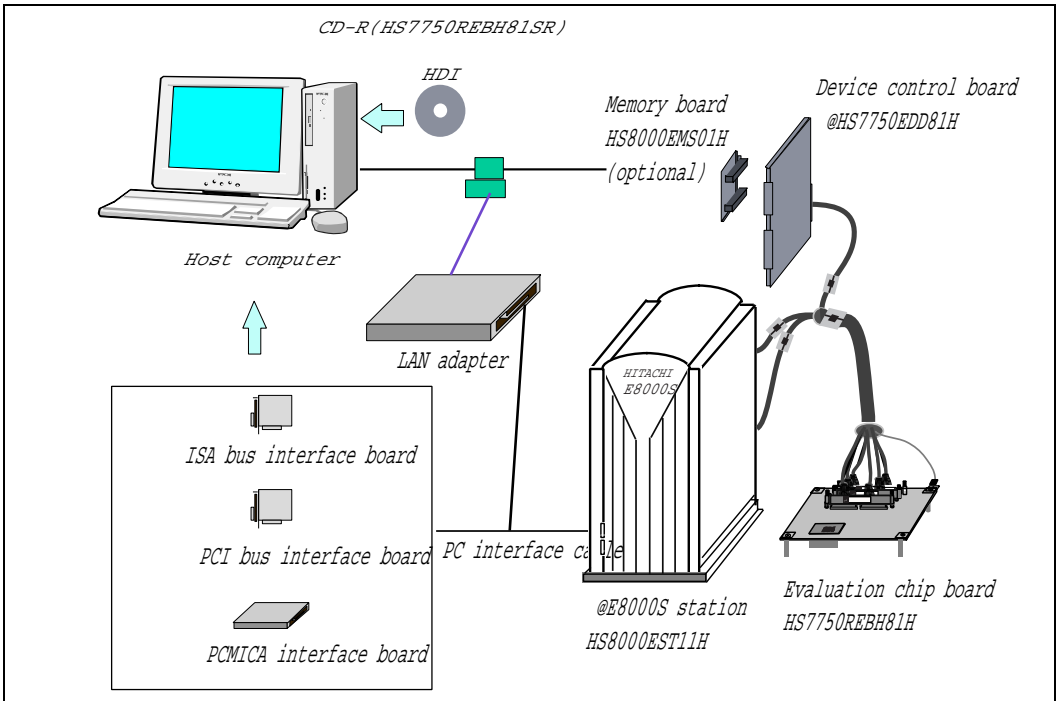


Figure 2.1 Test System Configuration

Section 3 Diagnostic Program Function

3.1 General Description

The diagnostic program has three test-system configurations: E8000S ONLY test and E8000S + EVCHIP test and E8000S + EVCHIP + FIXED USER test. Note that the E8000S + EVCHIP + FIXED USER test cannot be executed, for it is the E8000S emulator system test at shipment and needs an additional system for testing.

CAUTION

Before executing an independent E8000S emulator system test, remove the EV-CHIP BOARD from the USER SYSTEM. Correct test results cannot be obtained when the E8000S emulator is still..... connected to the user system.

1. E8000S Emulator System Test (E8000S ONLY)

The system configuration shown in figure 2.1 is used for testing the E8000S emulator system. The test results are displayed on the host computer display. After start-up, the system enters an endless test loop without operator intervention until an error is detected. When an error occurs and ERROR CONTINUE is not specified, the test is terminated. If ERROR CONTINUE is specified, the test resumes execution after an error content display. When initiating the diagnostic program, select whether to execute the following tests:

— Operation tests

2. Test of E8000S Emulator and SH7750R EV-Chip Board (E8000S + EVCHIP)

The system configuration shown in figure 2.1 is used for testing the E8000S emulator, and the SH7750R EV-chip board for the E8000S emulator. The test results are displayed on the host computer display. After start-up, the system enters an endless test loop without operator intervention until an error is detected. When an error occurs and ERROR CONTINUE is not specified, the test is terminated. If ERROR CONTINUE is specified, the test resumes execution after an error content display. When initiating the diagnostic program, select whether to execute the following test:

— Operation test

Notes: Stop diagnostic program execution, after it has been executed for two times by pressing the STOP button on the [DIAGNOSTIC PROGRAM] dialog box and interrupt the test.

3.2 Test Items of the Diagnostic Program

The test items to be tested by this diagnostic program are listed in table 3.1. The test items to be executed depend on the test system configuration.

Table 3.1 Diagnostic Program Test Items

No.	Test Item	Description	Executed or Not	
			E8000S ONLY	E8000S + EVCHIP
TEST01	FLASH MEMORY READ TEST	Control board flash memory test	O	O
TEST02	CONT WORK RAM TEST	Control board work RAM test	O	O
TEST03	RESERVE	Reserved	O	O
TEST04	RESERVE	Reserved	O	O
TEST05	RESERVE	Reserved	O	O
TEST06	RESERVE	Reserved	O	O
TEST07	RESERVE	Reserved	O	O
TEST08	RESERVE	Reserved	O	O
TEST09	RESERVE	Reserved	O	O
TEST10	CONT REG. TEST	Control board register test	O	O
TEST11	IDR READ TEST	E8000S hardware configuration check	O	O
TEST12	DIP SWITCH TEST	Control board DIP switch test	X	X
TEST13	TRACE REG. TEST	Trace board register test	O	O
TEST14	TRACE RAM TEST	Trace board RAM test	O	O
TEST15	RESERVE	Reserved	O	O
TEST16	EBOX TEST	DCONT firmware and ID check		O
TEST17	ERAM WINDOW TEST	ERAM read/write test		O
TEST18	ERAM STEP TEST	ERAM step test		O
TEST19	ERAM HARD BREAK TEST1	ERAM hardware break test		O
TEST20	ERAM HARD BREAK TEST2	ERAM hardware break test		O
TEST21	ERAM SOFT BREAK TEST	ERAM software break test		O
TEST22	COMPULSORY BREAK TEST	CBR register break test		O

Table 3.1 Diagnostic Program Test Items (cont)

No.	Test Item	Description	Executed or Not	
			E8000S ONLY	E8000S + EVCHIP
TEST23	ERAM TRACE TEST	ERAM trace mode test		O
TEST24	ERAM TIME MEASUREMENT TEST	Time measurement function check		O
TEST25	ERAM PARALLEL MONITOR TEST	ERAM parallel monitor test		O
TEST26	RESERVE	Reserved		O
TEST27	JTAG CONTROLLER TEST	JTAG controller test		O
TEST28	RTC TEST	Test for port pin that is multiplexed with other signals		O
TEST29	HS8000EMS01H TEST	Read/write test for optional ERAM		×
TEST30	EMCLK TEST	EMCLK test		O
TEST31	RESERVE	Reserved		O

Notes: O: Executed without operator intervention

X: Executed when specified

None: Not executed

Note: If an error occurs and ERROR CONTINUE is not specified, displays an error message, stops test execution, and displays the following message:

Retry (Y/N) ?

If Y is entered, retests the test item wherein the error occurred.

If N is entered, displays the following message:

Continue (Y/N) ?

If Y is entered, quits testing the test item wherein the error occurred and goes on to the next test item.

If N is entered, displays the following message:

Abort (Y/N) ?

If Y is entered, resets the system software.

If N is entered, returns to the first message (Retry (Y/N) ?) and repeats the above procedure until Y is entered.

3.3 Operation Flowchart

Figure 3.1 shows the diagnostic program operation flowchart.

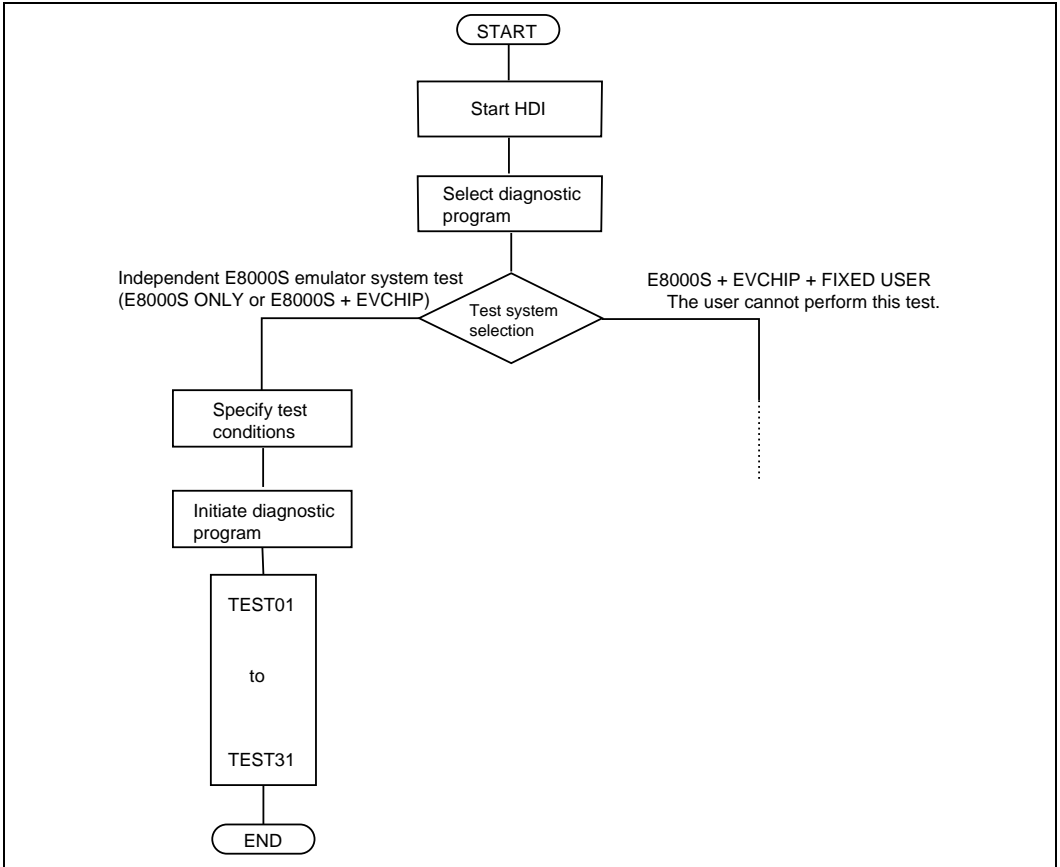


Figure 3.1 Diagnostic Program Operation Flowchart

Note: TEST12 is executed when the operation tests are specified.
TEST16 to TEST31 are not executed when the E8000S ONLY test is selected. ••••••••••TEST29 is executed when the HS8000EMS01H test is specified.

Section 4 Diagnostic Program Operation Procedures

This section describes the diagnostic program operation procedure.

WARNING

Always switch OFF all devices before connecting or disconnecting the E8000S EMULATOR and OTHER DEVICES.

Failure to do so will result in a FIRE HAZARD and will damage the E8000S emulator and other devices, or will result in PERSONAL INJURY.

When the diagnostic program is executed by using the ISA bus interface (PCI interface, PCMCIA interface, or LAN adapter is included), execute the program from the HDI. For HDI installation and diagnostic program operation, refer to section 3.5 Installing the System Program, and section 3.7.4 Operating Procedure for the Diagnostic Program, in section 3 Preparation before Use in the SH7750R E8000S Emulator User's Manual.

- Notes:**
- 1. To execute the diagnostic program, DIAG.SYS, E8000.SYS, SHCNF50R.SYS, and SHDCT50R.SYS must be installed in flash memory, according to the instructions in the SH7750R E8000S Emulator User's Manual (HS7750REBH81HE).**
 - 2. Before executing the diagnostic program, make sure the DIP switches have the same settings as at shipment (refer to figure 4.1).**

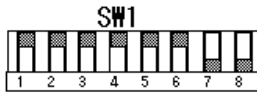


Figure 4.1 DIP Switch Setting at Shipment

4.1 Installation Procedure

To execute the diagnostic program, file DIAG.SYS must be installed in the E8000S emulator flash memory.

For details on installation, refer to section 3.5 Installing the System Program, in section 3 Preparation before Use, in the SH7750R E8000S Emulator User's Manual.

4.2 Operation Procedure

All documents should contain the following section break and paragraph as the last item. The footers of this document refer to the paragraph in order to reference the last page of the document.

1. Correctly connect the following components.

- E8000S emulator and host computer
- E8000S emulator and EV-chip board

For other components, check connection according to the user system configuration.

Remove the EV-chip board from the user system.

2. Turn on the following power supplies.

- Host computer
- E8000S emulator

For other components, supply an appropriate voltage according to the user system configuration.

3. Start up the Hitachi Debugging Interface (HDI) on the host computer.

After the HDI is initiated, the selection screen will be displayed as shown in figure 4.2. Select Yes to execute the diagnostic program. The start message will be displayed as shown in figure 4.3.

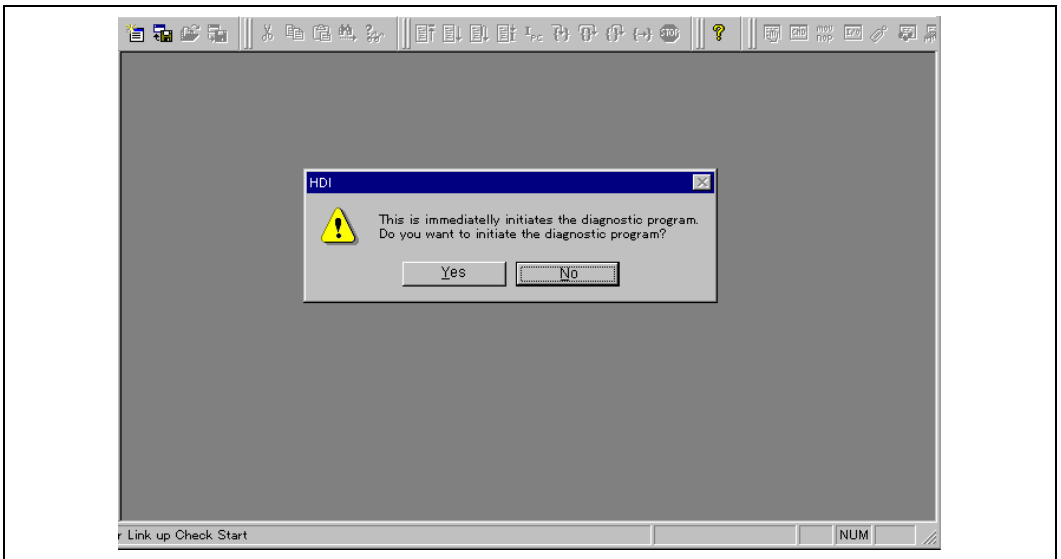


Figure 4.2 Selection Screen of the Diagnostic Program

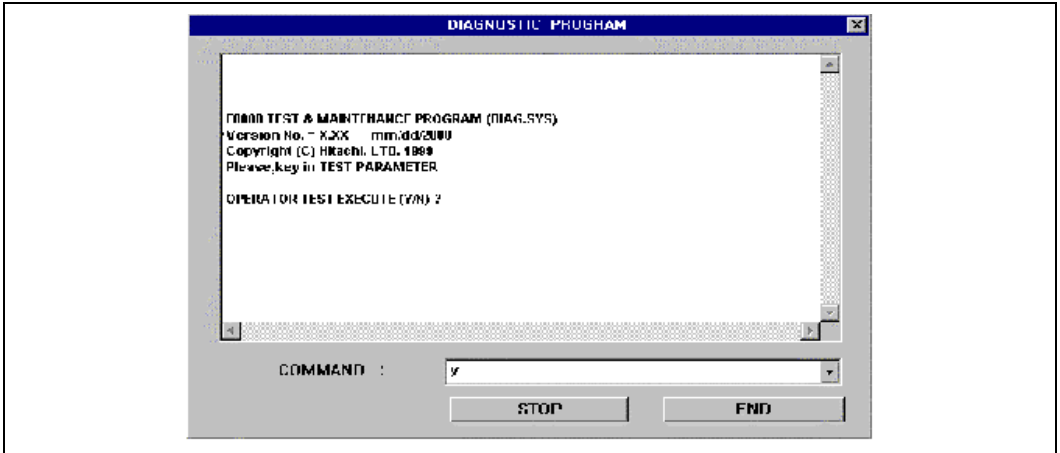


Figure 4.3 Start Message of the Diagnostic Program

4. Select test condition

Select the desired test conditions.

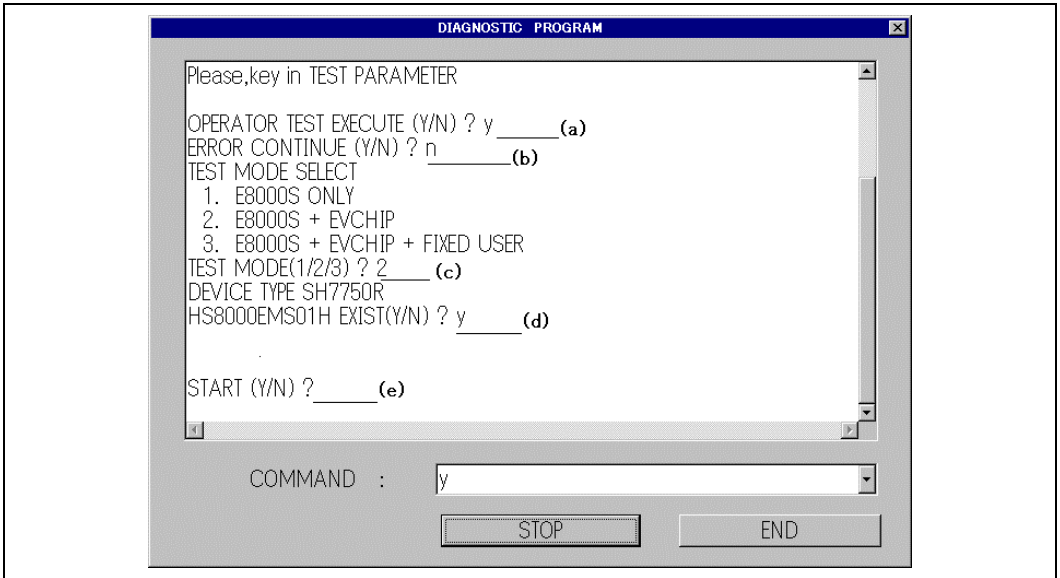


Figure 4.4 Selection of the Test Condition

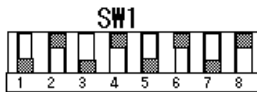
Description:

- (a) Only for tests requiring operator intervention. Enter Y to execute the operation tests. Otherwise, enter N.
- (b) Y: Test continues when an error occurs.
N: Test stops when an error occurs.

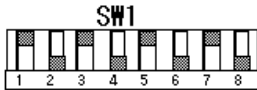
- (c) 1: E8000S emulator system test (independent E8000S emulator system test)
 - 2: E8000S emulator, device control board, and EV-chip board test
 - 3: E8000S emulator system test at shipment — cannot be used.
 - (d) Y: Memory board is connected.
N: Memory board is not connected.
 - (e) The test starts by entering Y. If N is entered, the diagnostic program main title will be displayed again.
5. Execute the diagnostic program using the procedure shown in figure 3.1.
Execute each test item following the diagnostic program specifications. OK is displayed if a test is executed with no errors. An example of the E8000S + EVCHIP test is shown at the end of section 4.
6. For executing the operation tests (TEST12)
- To execute the operation tests, operator interventions are required during diagnostic program execution. Perform the following operations while executing the operation tests.
- Operation Procedures for TEST12 (DIP SWITCH TEST):
- (1) Enter Y to the following message at diagnostic program initiation:
OPERATION TEST EXECUTE (Y/N)? Y (RET)
 - (2) When the diagnostic program is executed, the E8000S emulator will halt at the following message and wait for command input:
TEST12 DIP SW TEST (COUNT = 001)
DIP SW1 = C0
DIP SWITCH 1= 55 SET OK (Y/N)
 - (3) After setting the DIP switches as shown in figure 4.5 (1), enter Y.
 - (4) If no error occurs, the following message is displayed:
TEST OK
 - (5) The E8000S emulator will halt again at the following message:
DIP SWITCH 1= AA SET OK (Y/N)
 - (6) After setting the DIP switches as shown in figure 4.5 (2), enter Y.
 - (7) If no error occurs, the following message is displayed:
TEST OK
 - (8) The E8000S emulator will halt again at the following message:
DIP SWITCH 1= C0 SET OK (Y/N)
 - (9) After setting the DIP switches as shown in figure 4.5 (3), enter Y.
 - (10) If no error occurs, the following message is displayed:
TEST OK

Note: (RET): RETURN key

(1) DIP switch setting (55)



(2) DIP switch setting (AA)



(3) DIP switch setting (CO (at shipment))

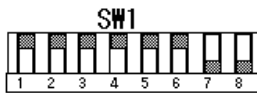


Figure 4.5 DIP Switch Settings

```

E8000S TEST & MAINTENANCE PROGRAM (DIAG.SYS)
Version No. = x.xx      mm/dd/yyyy      (x.xx: version number)
Copyright (C) Hitachi, LTD. 1999
Please,key in TEST PARAMETER

OPERATOR TEST EXECUTE (Y/N) ? n
ERROR CONTINUE (Y/N) ? n
TEST MODE SELECT
1.  E8000S ONLY
2.  E8000S + EVCHIP
3.  E8000S + EVCHIP + FIXED USER
TEST MODE(1/2/3) ? 2

DEVICE TYPE SH7750R
HS8000EMS01H EXIST(Y/N) ? y

START (Y/N) ? y
TEST01 FLASH MEMORY READ TEST (COUNT=001)
(1)MONITOR SUM CHECK      OK
(2)SYSTEM SUM CHECK      OK
(3)EVCHIP FIRM SUM CHECK  OK
(4)CONFIG SUM CHECK      OK
(5)T/M SUM CHECK         OK
(6)ITRON SUM CHECK
NO TRON FILE
TEST02 CONT WORK RAM TEST      (COUNT=001)
(1) PAUSE TEST      OK
(2) MARCHING TEST   OK
TEST03 RESERVE              (COUNT=001)
TEST04 RESERVE              (COUNT=001)
TEST05 RESERVE              (COUNT=001)
TEST06 RESERVE              (COUNT=001)
TEST07 RESERVE              (COUNT=001)

```

Figure 4.6 Diagnostic Program Output Example (E8000S + EVCHIP Test)

```

TEST08 RESERVE                (COUNT=001)
TEST09 RESERVE                (COUNT=001)
TEST10 CONT REG. TEST        (COUNT=001)   OK
TEST11 IDR READ TEST         (COUNT=001)
ID CODE = 0000F4ED
PC I/F BOARD :CONNECT
TRC BOARD    :CONNECT
DCONT BOARD  :CONNECT
EVCH BOARD   :CONNECT
TEST13 TRACE REG. TEST      (COUNT=001)   OK
TEST14 TRACE RAM TEST       (COUNT=001)
    (1) PAUSE TEST          OK
    (2) MARCHING TEST       OK
TEST15 RESERVE              (COUNT=001)
TEST16 EBOX TEST            (COUNT=001)
    (1)BOX ID CODE          OK
    (2)EBOX ID CHECK        OK
    (3)ULSR TEST           OK
    (4)MAPR R/W TEST        OK
TEST17 ERAM WINDOW TEST     (COUNT=001)
    (1)ERAM WINDOW TEST
        (1-0)ERAM CS0 R/W BIG ENDIAM TEST    OK
        (1-1)ERAM CS0 R/W LITTLE ENDIAN TEST OK
        (1-2)ERAM CS1 R/W BIG ENDIAM TEST    OK
        (1-3)ERAM CS1 R/W LITTLE ENDIAN TEST OK
        (1-4)ERAM CS2 R/W BIG ENDIAM TEST    OK
        (1-5)ERAM CS2 R/W LITTLE ENDIAN TEST OK
        (1-6)ERAM CS3 R/W BIG ENDIAM TEST    OK
        (1-7)ERAM CS3 R/W LITTLE ENDIAN TEST OK
    (2)ERAM WP TEST         OK
TEST18 ERAM STEP TEST       (COUNT=001)   OK
TEST19 ERAM HARD BREAK TEST1 (COUNT=001)
    (1)ASE HW HARDBREAK TEST OK
    (2)CHA0-7 HARDBREAK TEST OK
    (3)CHB0-7 HARDBREAK TEST OK
    (4)CHC0-7 HARDBREAK TEST OK

```

Figure 4.6 Diagnostic Program Output Example (E8000S + EVCHIP Test) (cont)

```

TEST20 ERAM HARD BREAK TEST2          (COUNT=001)
(1)SEQUENTIAL BREAK TEST      OK
(2)TBM OVERFLOW BREAK TEST    OK
(3)CHC TIMEOUT BREAK TEST     OK
(4)CHB0 INTERRUPT TEST        OK
TEST21 ERAM SOFT BREAK TEST          (COUNT=001)    OK
TEST22 COMPULSORY BREAK TEST        (COUNT=001)    OK
TEST23 ERAM TRACE TEST              (COUNT=001)
(1)RANGE TRACE TEST           OK
(2)TRACE STOP TEST            OK
(3)SEQUENTIAL TRACE STOP TEST  OK
(4)RAR OVERFLOW TRACE STOP TEST OK
(5)TIMEOUT TRACE STOP TEST     OK
(6)ERAM DATA CONTINUOUS ACCESS TEST OK
TEST24 ERAM TIME MEASURE TEST        (COUNT=001)
(1)SUBROUTINE TIME MEASURE TEST1  OK
(2)SUBROUTINE TIME MEASURE TEST2  OK
(3)SUBROUTINE TIME MEASURE TEST3  OK
(4)SUBROUTINE TIME MEASURE TEST4  OK
(5)TIME STAMP TEST             OK
TEST25 ERAM PARALLEL MONITOR TEST    (COUNT=001)    OK
TEST26 RESERVE                      (COUNT=001)
TEST27 JTAG CONTROLER TEST          (COUNT=001)    OK
TEST28 RTC TEST                     (COUNT=001)    OK
TEST29 HS8000EMS01H TEST            (COUNT=001)
(1-0)ERAM W MAPR1 H'0a800000-0aa00000 TEST    OK
(1-1)ERAM W MAPR1 H'0aa00000-0ac00000 TEST    OK
(1-2)ERAM W MAPR1 H'0ac00000-0ae00000 TEST    OK
(1-3)ERAM W MAPR1 H'0ae00000-0b000000 TEST    OK
(1-4)ERAM W MAPR2 H'15000000-15200000 TEST    OK
(1-5)ERAM W MAPR2 H'15200000-15400000 TEST    OK
(1-6)ERAM W MAPR2 H'15400000-15600000 TEST    OK
(1-7)ERAM W MAPR2 H'15600000-15800000 TEST    OK
(1-0)ERAM R MAPR1 H'0a800000-0aa00000 TEST    OK
(1-1)ERAM R MAPR1 H'0aa00000-0ac00000 TEST    OK
(1-2)ERAM R MAPR1 H'0ac00000-0ae00000 TEST    OK

```

Figure 4.6 Diagnostic Program Output Example (E8000S + EVCHIP Test) (cont)

```

(1-3)ERAM R MAPR1 H'0ae00000-0b000000 TEST      OK
(1-4)ERAM R MAPR2 H'15000000-15200000 TEST      OK
(1-5)ERAM R MAPR2 H'15200000-15400000 TEST      OK
(1-6)ERAM R MAPR2 H'15400000-15600000 TEST      OK
(1-7)ERAM R MAPR2 H'15600000-15800000 TEST      OK
(2)ERAM R/W MAPR WP TEST                          OK
TEST30 EMCLK TEST                                (COUNT=001)  OK
TEST31 RESERVE(COUNT=001)
TEST01 FLASH MEMORY READ TEST    (COUNT=002)
(a)                (b)                (c)
(1)MONITOR SUM CHECK                OK
                                      (d)

```

Figure 4.6 Diagnostic Program Output Example (E8000S + EVCHIP Test) (cont)

Description:

- (a) Test item number
- (b) Test item
- (c) Execution count
- (d) Test result

Section 5 Error Handling

5.1 Acquiring Execution Results and Printing Them

If an error occurs, provide a Hitachi sales agency with a detailed description of the problem.

The description given below is about the procedure to acquire execution results and print them.

5.1.1 Acquiring Diagnostic Program Execution Results

(a) Select test conditions as shown in figure 5.1.

Always select N for ERROR CONTINUE (Y/N) ? so that test will stop when an error occurs.

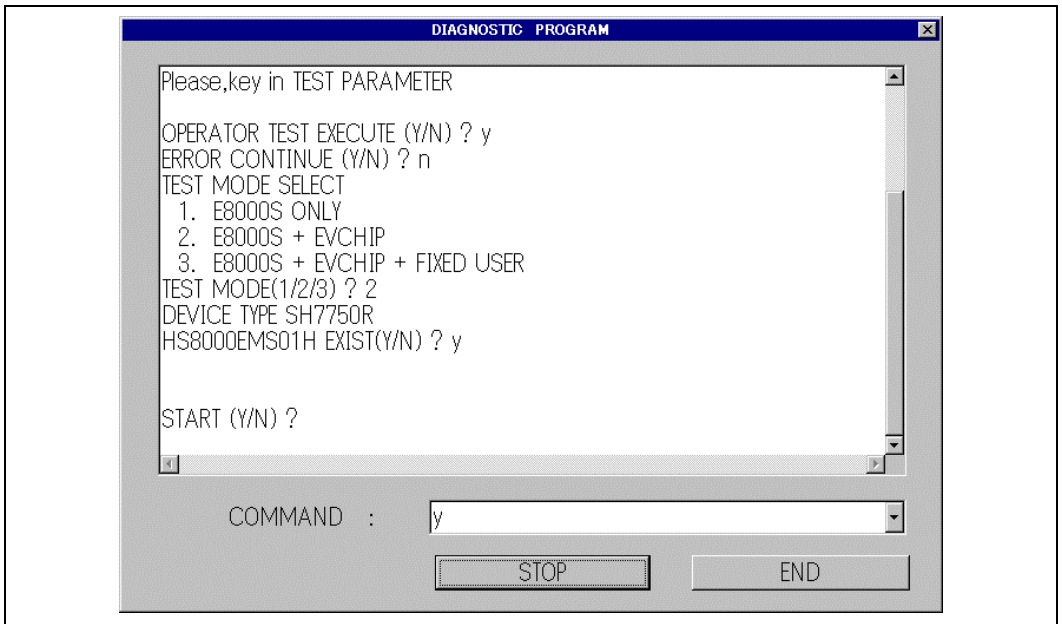


Figure 5.1 Testing Condition

(b) Execute the diagnostic program.

(c) When the test stops after an error occurs, cut and paste where the error occurred in the text file (TM.LOG) and create a file.

5.1.2 Printing Execution Results

Open the diagnostic file including the error results of the diagnostic program and print it out from the host computer used.