## Old Company Name in Catalogs and Other Documents

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# HITACHI SEMICONDUCTOR TECHNICAL UPDATE

DATE	7th December, 1998	No.		TN-EML-038A/E		
ТНЕМЕ	Restriction on Write-Protection Area Setting in SH7040 Series E7000 Emulator (HS7040EPD71H)					
CLASSIFICATION	☐ Spec. change ☐ Supplement of Documents	Spec. change				
PRODUCT NAME	HS7040EPD71H	Lot No. etc.		All		
REFERENCE DOCUMENT	SH7040 Series E7000 Emulator User's Manual (HS7040EPD70HE)	Effective Date From		Permanent		
In the SH7040 series E7000 emulator (HS7040EPD71H), write-protection can be set with the memory access function.  However, the problem of the memory map control circuit in the evaluation chip may cause the following phenomenon to occur. Even when there is no write cycle for the write-protected area, write to the write-protected area is judged to be attempted, and a break occurs.  This phenomenon depends on the operating frequency. When setting write-protection, operate the emulator at 28.7 MHz or less.  [Documentation]  Replace your "Precautions for the SH7040 Series E7000 Emulator" with the revised "Precautions for the SH7040 Series E7000 Emulator (HS7040EPD71HE-P(C))" provided with this Technical Update.						

## Precautions for the SH7040 Series E7000 Emulator

Thank you for using the SH7040 series E7000 emulator (HS7040EPD71H). Note the following when using this emulator.

## 1. Restrictions on Emulator Usage

#### 1.1 Trace Monitor Function

When an 8-bit area is accessed in word cycles, only the low-order eight bits can be displayed on the monitor.

#### 1.2 MODE Command

Though the internal ROM size (64 kB/128 kB/256 kB) can be selected with the MODE command, the following specifications must be considered.

Internal ROM: Even when selecting 64 kB or 128 kB, the 256-kbyte area is valid, and its memory area status in trace display is ROM.

Internal RAM: Though internal RAM is only 4 kB in the device, a 6-kbyte area is valid in the emulator, and its memory area status in trace display is RAM.

#### 1.3 Memory Contents Change Function

When an instruction on memory (internal ROM, internal RAM) is changed while debugging a program using cache memory, the memory contents and cache memory contents may not match.

If using one of the following commands to change an instruction on memory, initialize cache memory before starting emulation.

ASSEMBLE	DATA_CHANGE	FILL	MEMORY
MOVE	MOVE_TO_RAM	LOAD	FILE_LOAD
LAN LOAD	INTFC_LOAD		

## 1.4 Memory Access Function

To set a write-protection area with the memory access function, set the operating frequency to 28.7 MHz or lower.

#### 2. Restrictions on Device

## 2.1 Functions and Performance

Restrictions on the functions and performance of the device also apply to the emulator.

#### 2.2 A/D Module

This emulator supports a medium-speed A/D module. When using it, consider the specifications of the registers related to the A/D module. For details, refer to the SH7040 Series Hardware Manual.

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## 2.3 Minimizing EMI Noise

To minimize EMI\* noise, insert a supplied core to each of the station-pod interface cables before using the emulator, as shown in figure 1. The cores must be inserted to the cables in a range that is at least 200 mm away and up to 300 mm from the emulator station.

Note: EMI stands for Electrical Magnetic Interference.

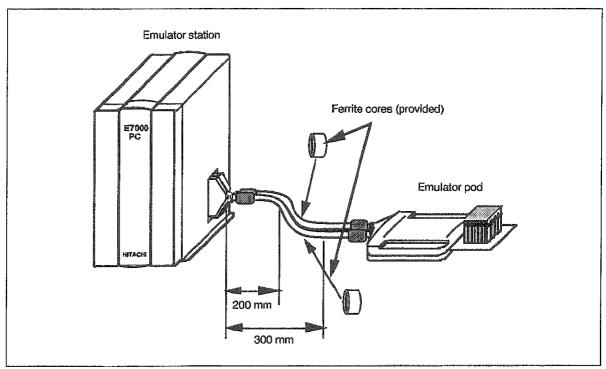


Figure 1 Core Insertion