

Chapter 7. MK PROGRAMMING



This chapter explains the programming method for using the high speed counter module.

7.1 Buffer Memory Read / Write

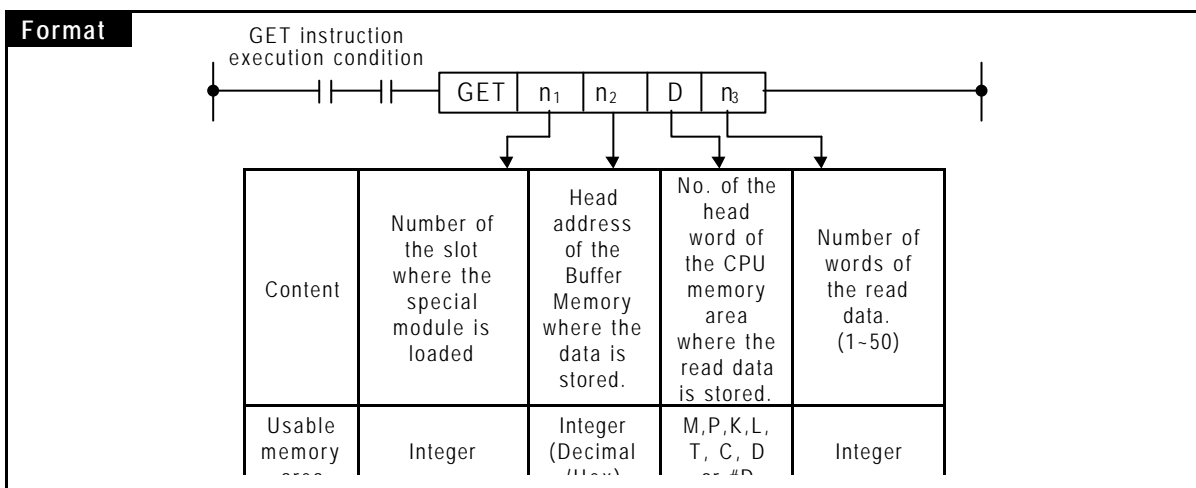
The followings explain the read/write of the PLC CPU from/to the Buffer Memory.

7.1.1 Read from the Buffer Memory(GET,GETP)

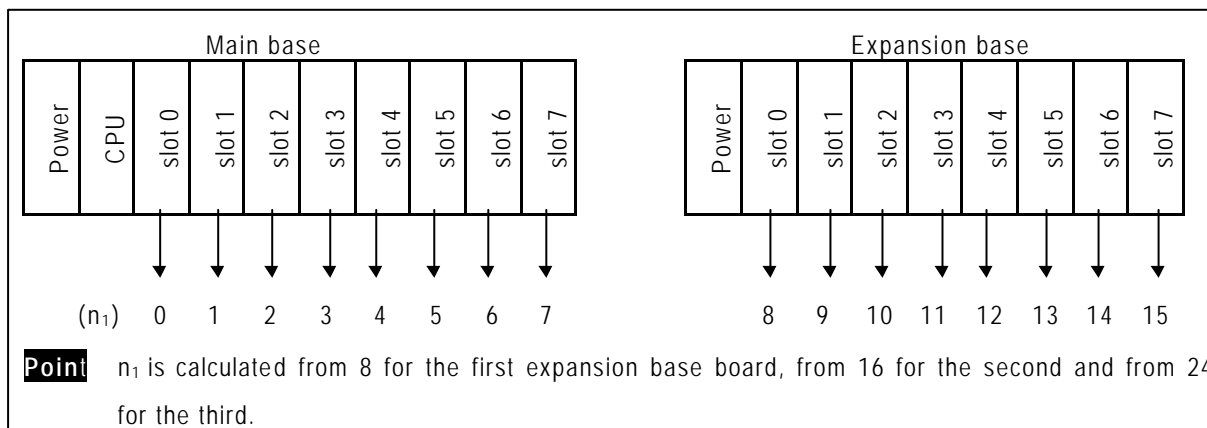
The instruction given below are used to read data from the Buffer Memory of the high speed counter module to the CPU. The data read can be stored to the CPU memory(F area is not excluded.).

Always executed when the execution condition is in the On state. .		GET
Executed when the execution condition turns On.		GETP

[Table 7.1] The difference between GET and GETP



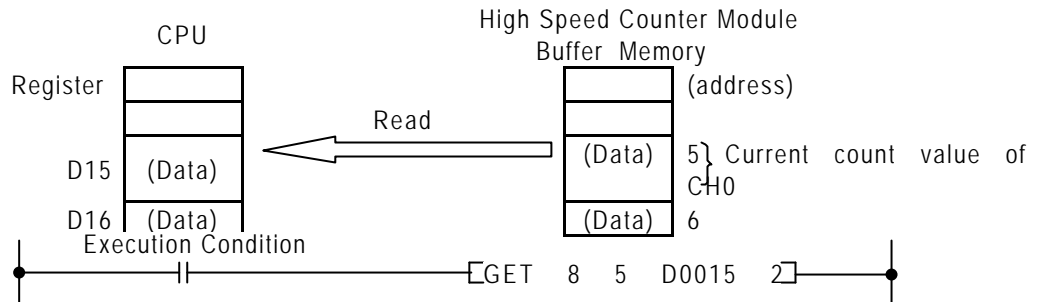
[Fig 7.1] Read Instruction GET



[Fig 7.2] Method for Obtaining n1.

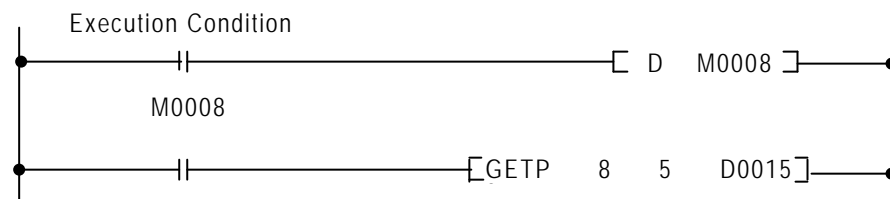
Example 1

When the high speed counter module is mounted on the first expansion base and the data at address 5 of the Buffer Memory is read to the D15 of the CPU.



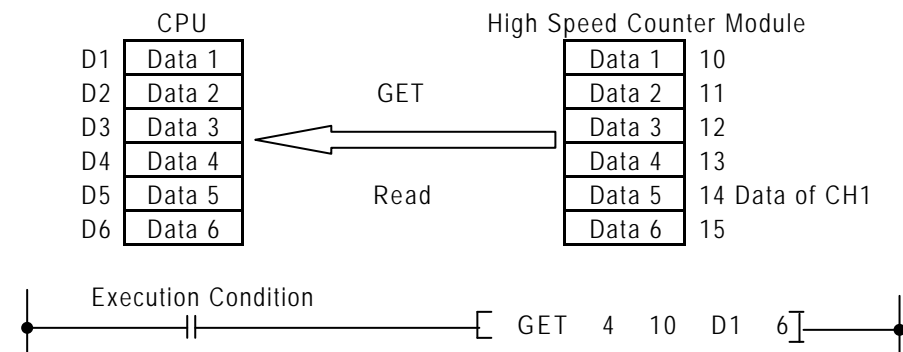
Example 2

When the same data as the example 1 is read but a pulse relay is used.



Example 3


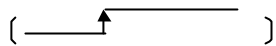
When the high speed counter module is mounted on the slot 4 of the main base and the 6-word data from address 6 of the Buffer Memory are read to the D1 to D6.



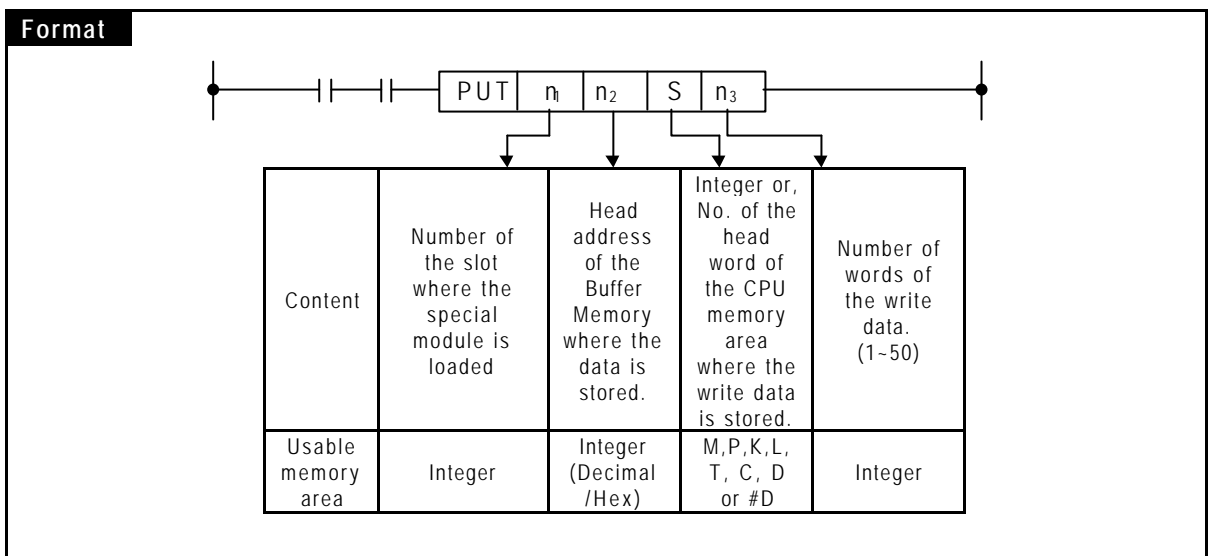
[Fig 7.3] 16-Bit Data Read Example

7.1.2 Write to the Buffer Memory(PUT,PUTP)

Besides the data stored in the CPU memory area, decimal integer(OO) and hexadecimal integer(HOO) can be used as the data that can be written from the CPU to the Buffer Memory of the high speed counter module.

Always executed when the execution condition is in the On state. .	()	PUT
Executed when the execution condition turns On.	()	PUTP

[Table 7.3] The Difference between PUT and PUTP

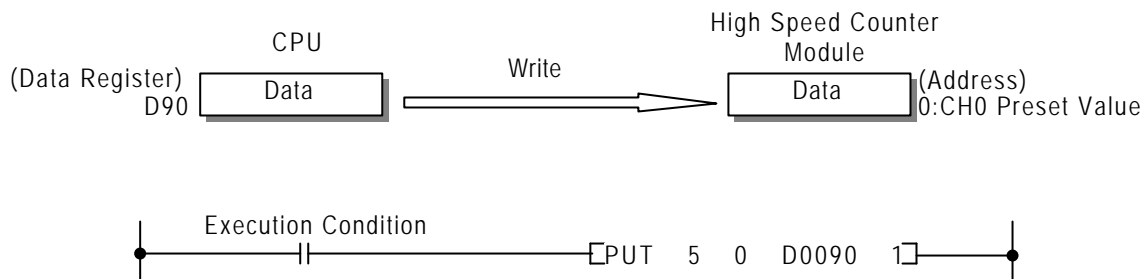


[Fig 7.4] Write Instruction PUT

Example 1

● 16-bit data Write

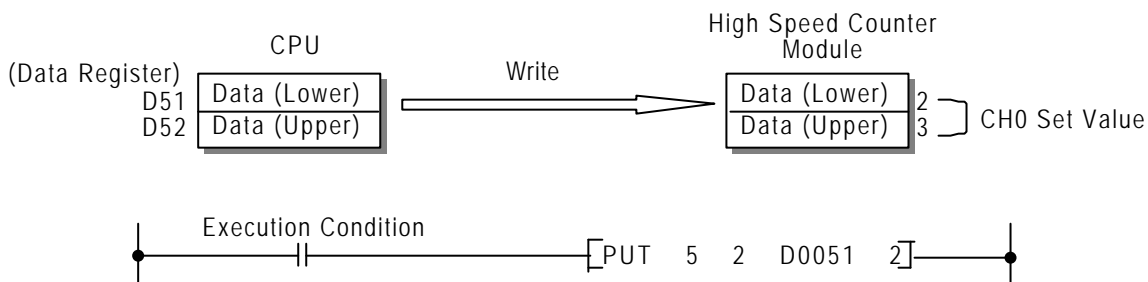
When the High Speed Counter Module is mounted on the slot 2 of the first expansion base unit and 1-word data stored in the data register D90 is written to the address 0 of the Buffer Memory.



Example 2

● 32-bit data Write

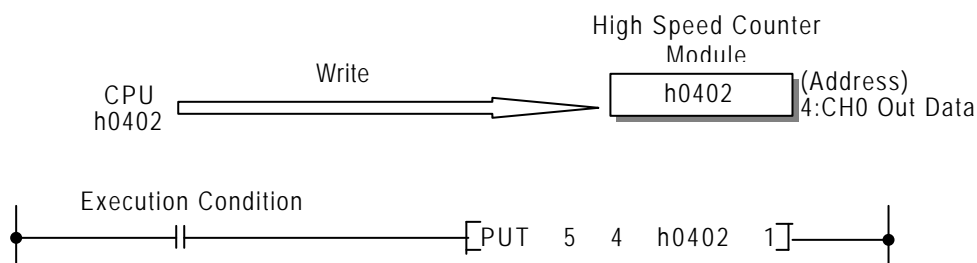
When the High Speed Counter Module is mounted on the slot 5 of the main base and 2-word(32-bit) data stored in the data registers D51 and D52 is written to the addresses 2 and 3 of the Buffer Memory.



Example 3

● Integer Write

When the High Speed Counter Module is mounted on the slot 5 of the main base and H0402 is written to the address 4 of the Buffer Memory.

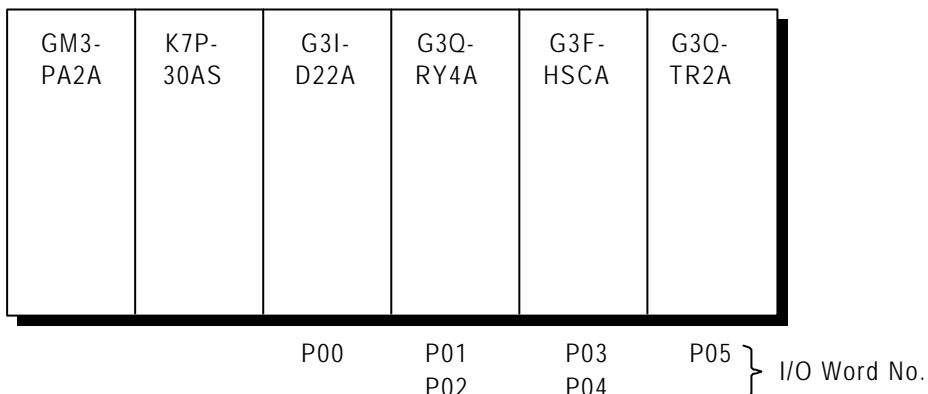


[Fig 7.5] Write Example

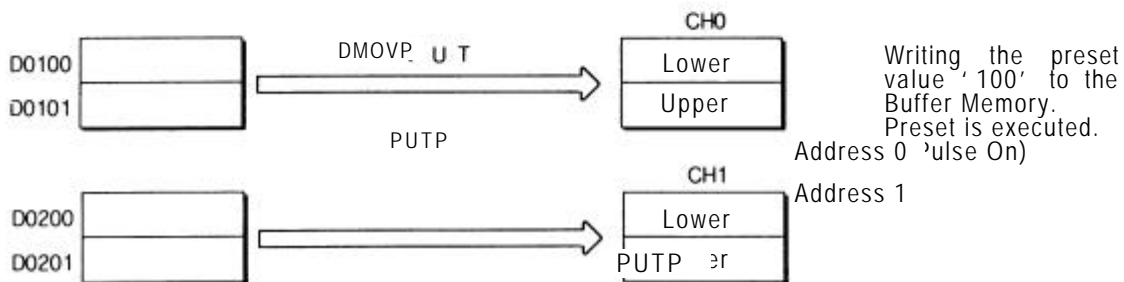
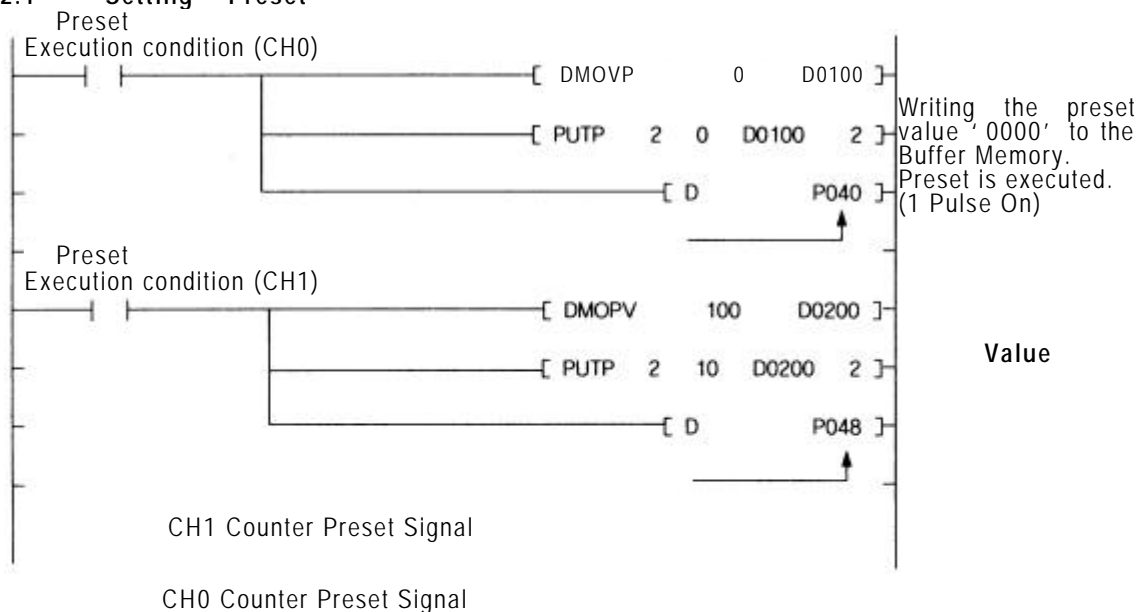
7.2 Programming Examples

If not especially noted, this section explains programming examples in reference with the K7F-HSCA that is mounted on the system given below.

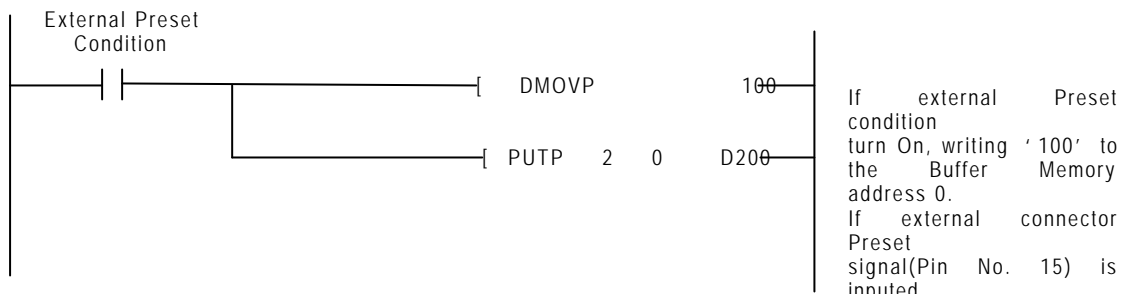
System configuration



7.2.1 Setting Preset

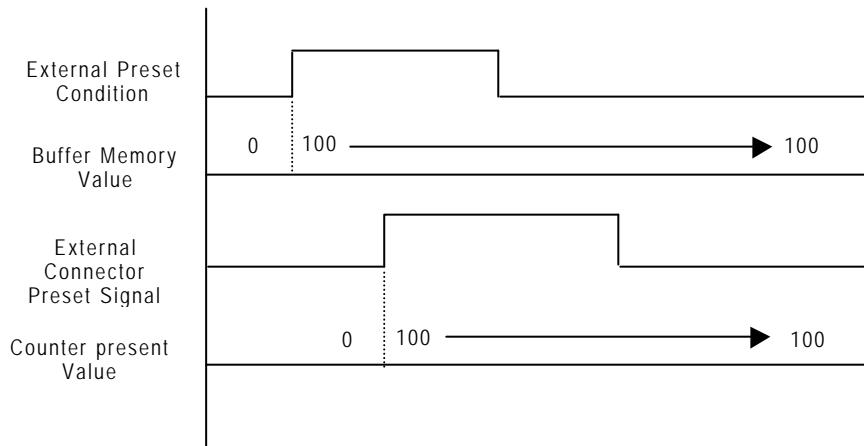


Setting Preset Value by External Preset Input (Only G6F-HSCA)

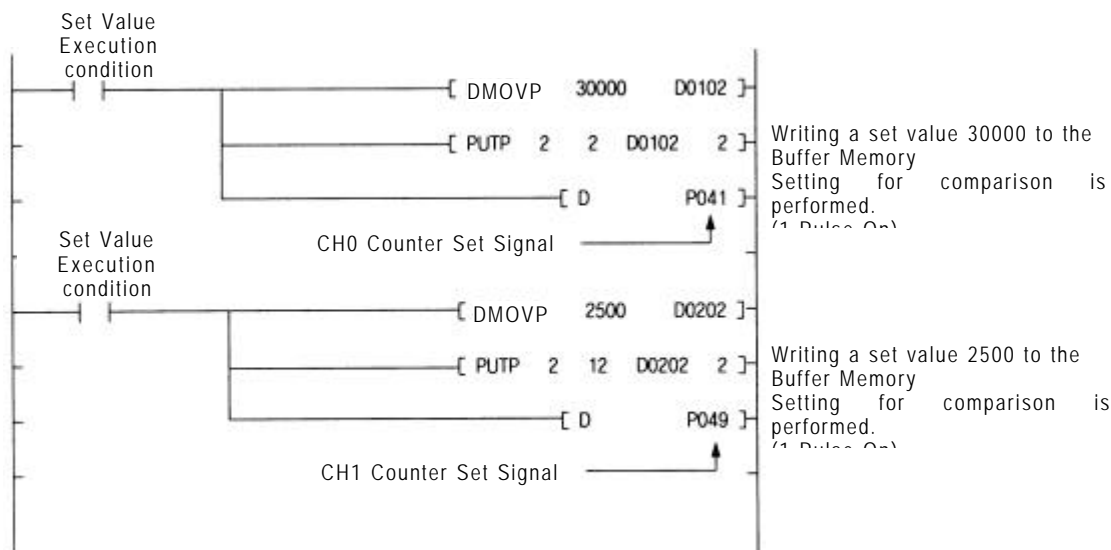


If external Preset condition turn On, writing '100' to the Buffer Memory address 0.
 If external connector Preset signal(Pin No. 15) is innuted

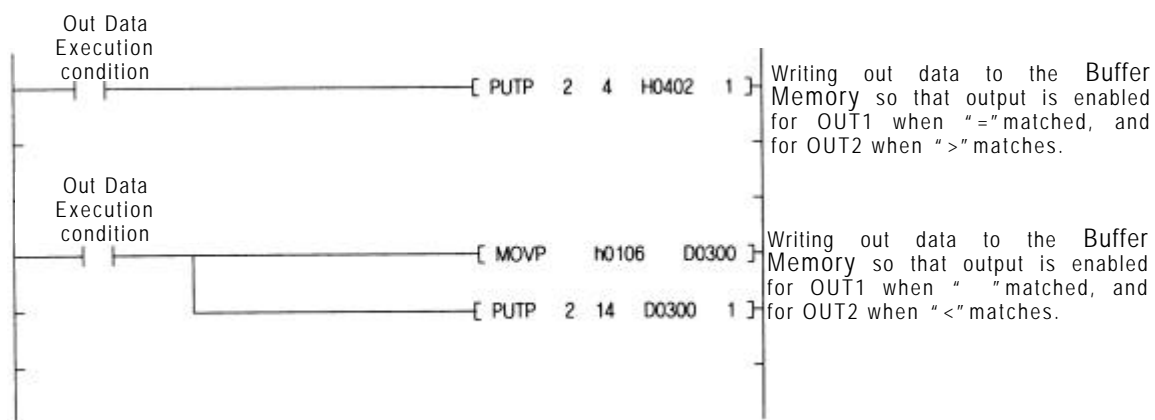
Timing Chart



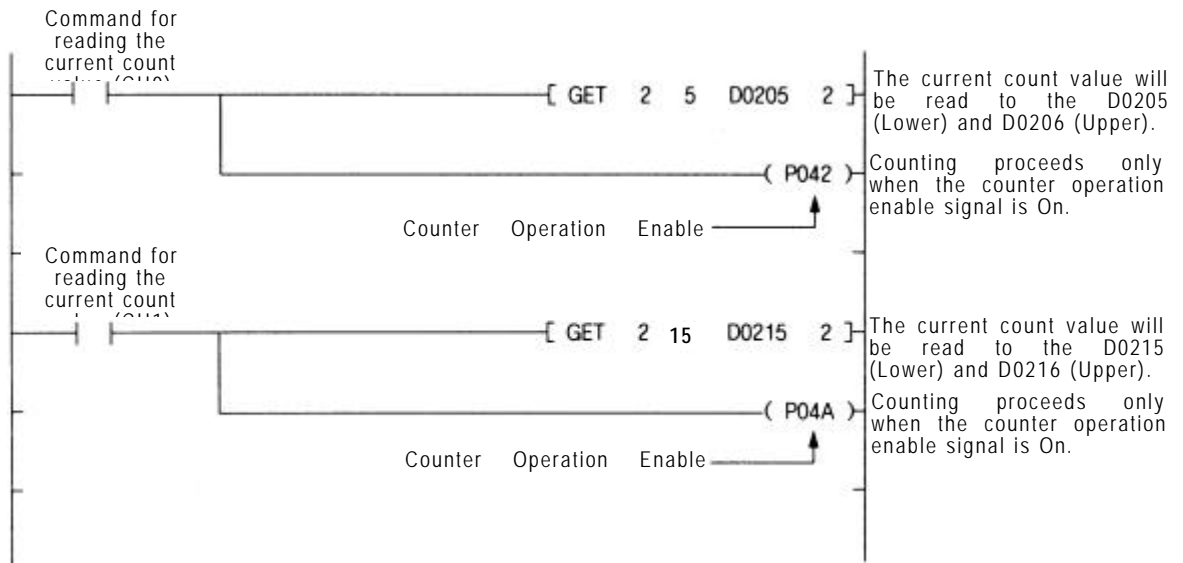
7.2.2 Setting Comparison Value



7.2.3 Setting OUT DATA

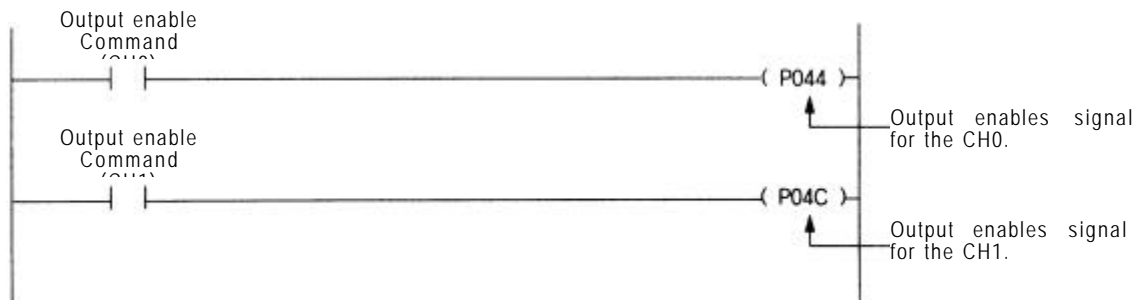


7.2.4 Reading the Current Count Value



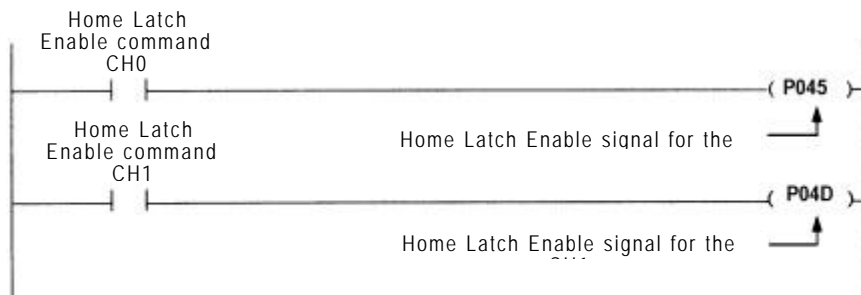
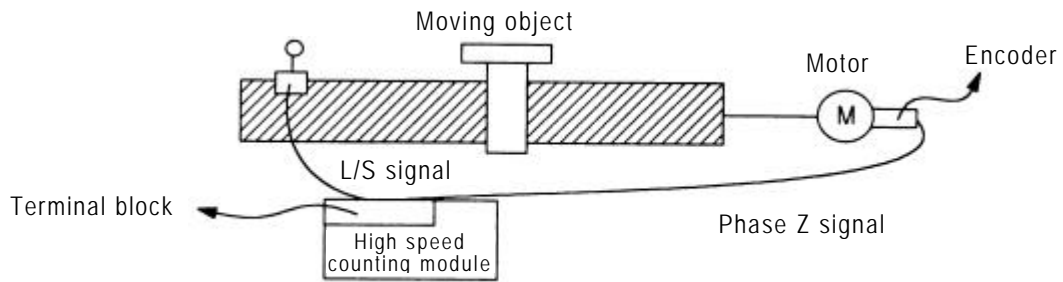
7.2.5 Enabling Output

Turn On the P044 and P04C to enable outputs to the external terminals OUT1 and OUT2.



7.2.6 Enabling Home Latch

Home Latch enable signal is used to set the current count value to 0 (zero) when the mechanical reference point has been reached.



· Timing Chart

