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MSC TECHNICAL NEWS

No. M7700-18-9305

Note on changing the interrupt priority level

1. Related microcomputer

Series 7700

2. Note

Time enough for changing the interrupt priority level shall be taken in case of changing the interrupt priority level of the same interrupt sources in a short execution time among a few instructions.

Therefore, program like the following example.

< A programming example >

```

•
•
SEB ; rewrite the interrupt priority level selection bit (level 0 → 1—7)
• ; add NOP(*1) or instructions which have same cycles of NOP(*1)
• (except SEB and CLB)
•
CLB ; rewrite the interrupt priority level selection bit (level 1—7 → 0)
•
•

```

3. Reason

It is necessary for rewriting the interrupt priority level selection bit(*2) to take 1 to 4 cycles after executing the instruction for it. The number of cycles for rewriting are different with the interrupt priority detection time(*3).

*1: The number of instructions are different with the interrupt priority detection time.

*2: Select the interrupt priority level with bit 2 to 0 of each interrupt control register.

*3: Select the interrupt priority level detection time with bit 5,4 of the processor mode register.

4. The number of added instructions

The interrupt priority detection time	The number of added instructions
2 cycles	1
4 cycles	2
7 cycles	4

*Select 2 cycles for the interrupt priority level detection time as much as possible.