

# TECHNICAL BULLETIN

[Issue No.] FA-A-0156-A

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[Title] Considerations of communication with QnPRHCPU using USB

[Date of Issue] July 2013 (Ver. A: March 2014)

[Relevant Models] QnPRHCPU

Thank you for your continued support of Mitsubishi programmable controllers, MELSEC-Q series.

This bulletin explains considerations when connecting a personal computer and QnPRHCPU with a USB cable.

Take considerations when turning ON a personal computer or recovering from the hibernation mode while operating QnPRHCPU, QnPRHCPU may be stopped with error.

This symptom may occur because of the recent availability of high-speed communication with a personal computer via USB.

We recommend connecting a USB cable as shown in "2. Connection Procedure", in order to prevent this symptom.

However, the operation is not necessarily guaranteed to all personal computers about USB connection.

For the personal computers where we have confirmed the symptom did not occur, refer to "4. Personal computers that do not stop QnPRHCPU with error."

\*1: For the personal computers with which we have confirmed QnPRHCPU has been stopped with error, refer to "3. Personal computers that stop QnPRHCPU with error".

## 1. Symptom

We have confirmed the occurrence of the following symptoms.

QnPRHCPU may be stopped with error when turning ON a personal computer or recovering from the hibernation mode with the personal computer that supports USB 2.0 or USB 3.0 while operating QnPRHCPU.

(However, there is no problem when recovering from the standby mode.)

Some personal computers provide a high-speed USB communication for CPU when turning ON a personal computer or recovering from the hibernation mode. In case when using one of those personal computer, the USB communication process of the CPU cannot be performed normally. Consequently, the CPU may be stopped by error.

However, even if this symptom is occurred, the system is not stopped because the system is controlled by the switching system\*2 continuously.

We have improved the products after March. 2013 (first 5 digits of serial number are "15032" or higher) so as to not occur the symptom.

\*2: When the control system is stopped with error, the switching system is activated and the control system is changed to the standby system and controlled continuously.

When the standby system is stopped with error, the switching system is not activated and the control system maintains the operation.

## 2. Connection Procedure

When connecting a personal computer and QnPRHCPU with a USB cable, disconnect a USB cable before turning ON a personal computer or recovering from the hibernation mode. Connect a USB cable after starting up Windows®.

Additionally, when operating a personal computer using AC power, an electric shock or a module failure may occur depending on the condition of the personal computer. Use a personal computer that has a 3-pin power plug or power plug with a ground lead type, make sure to use a plug socket including a ground input electrode or ground the earth lead, respectively. (For details, refer to the technical bulletin "Cautions when using MELSEC-Q/L/QS series and GOT-A900/GOT1000 series connected to a personal computer with the RS-232/USB interface" (T99-0032-□).)

In order to prevent the personal computer from entering the hibernation mode and stopping a CPU with error, disable the sleep mode in Control Panel on Windows® as shown the figure 1 and 2 on the next page. (When using Windows Vista®/Windows® 7/Windows® 8, disable the hybrid sleep as well.)

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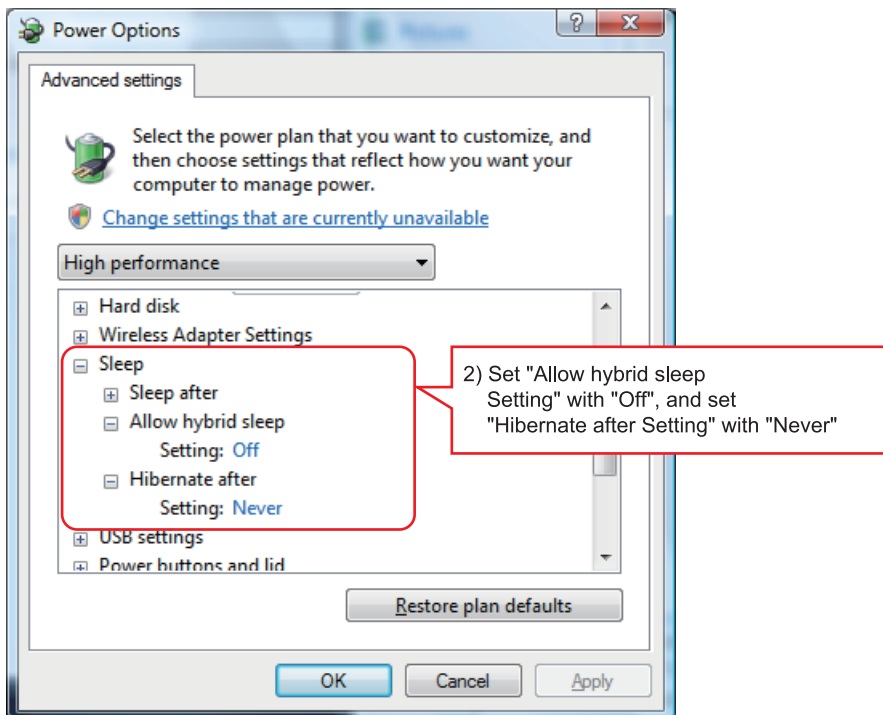
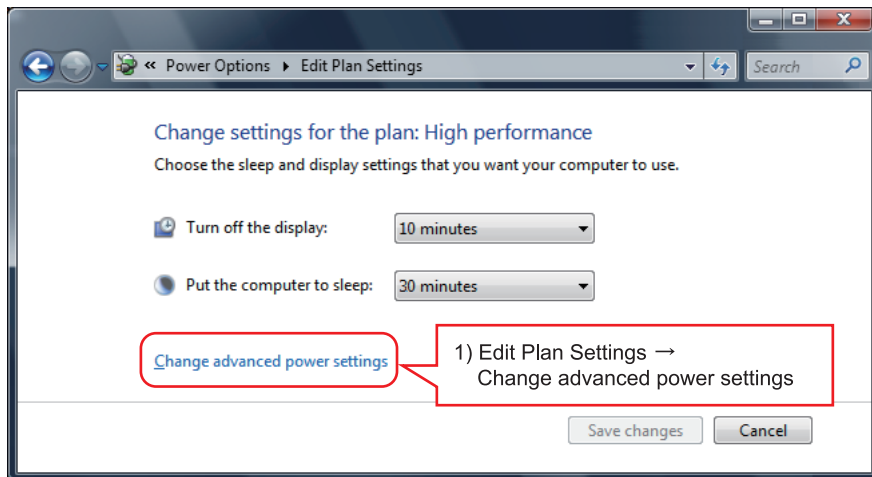


Figure 1. Power option of Control Panel (Example for Windows Vista®/Windows® 7/Windows® 8)

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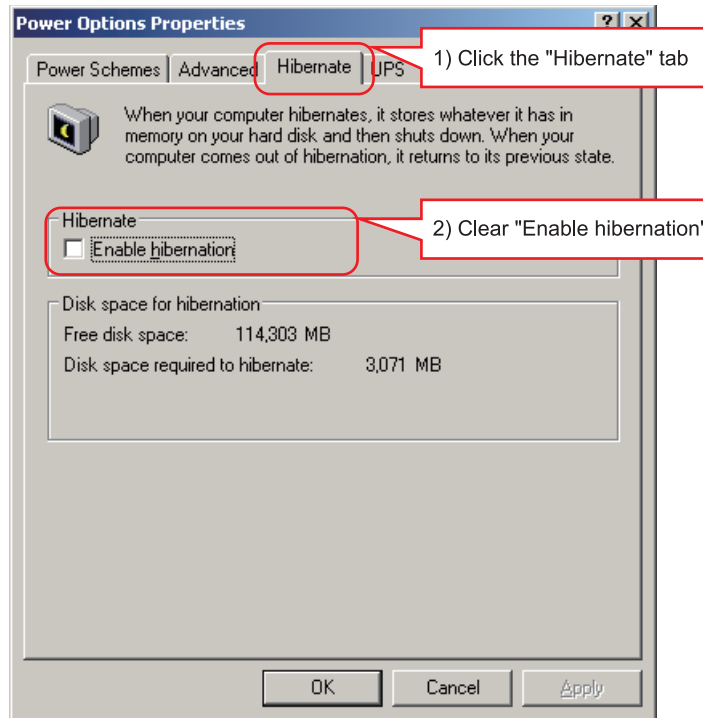


Figure 2. Power option of Control Panel (Example for Windows® 2000/Windows XP®)

### 3. Personal computers that stop QnPRHCPU with error

The following table shows the personal computers supporting USB 2.0 or USB 3.0, which is confirmed to stop QnPRHCPU with error.

Maker Name	Model
Dell Inc.	Latitude E6330
Dell Inc.	OptiPlex 990
Dell Inc.	Vostro 3360
FUJITSU LIMITED	PRIMERGY TX100 S1
FUJITSU LIMITED	LIFEBOOK A552/EX
FUJITSU LIMITED	LIFEBOOK A540/CX
FUJITSU LIMITED	FMV-E8280
Hewlett-Packard Company	HP Pavilion HPE h8-1290jp
Lenovo Group Limited	ThinkPad T520
Lenovo Group Limited	ThinkPad T530
Sycom Co., Ltd.	Radiant VX2100B75

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## 4. Personal computers that do not stop QnPRHCPU with error

The following table shows the personal computers supporting USB 2.0 or USB 3.0, which is confirmed not to stop QnPRHCPU with error.

Maker Name	Model
Apple Inc.	MacBookAir A1465
Seiko Epson Corporation	Endeavor NA601E
Seiko Epson Corporation	Endeavor NJ2100
Seiko Epson Corporation	Endeavor NJ3300E
Seiko Epson Corporation	Endeavor NJ5700E
Seiko Epson Corporation	Endeavor Pro4700
Seiko Epson Corporation	Endeavor Pro5000
Dell Inc.	Latitude E4310
Dell Inc.	Latitude E6220
Dell Inc.	Latitude E6510
Dell Inc.	Optiplex 745
Dell Inc.	Radiant GZ2100H67B3
Dell Inc.	T7500
Dell Inc.	T7600
Dell Inc.	VOSTRO 3350
Dell Inc.	VOSTRO 3560
Dell Inc.	VOSTRO 3750
Dell Inc.	XPS L412Z BTX
Panasonic Corporation	Let's Note CF-SX2
Panasonic Corporation	Let's Note CF-W9
Lenovo Group Limited	ThinkPad X220 Tablet
Lenovo Group Limited	ThinkPad X220i
Hewlett-Packard Company	Compaq Pro 6300 SFF
Hewlett-Packard Company	EliteBook 8470w
Hewlett-Packard Company	Pavilion dv7
Hewlett-Packard Company	ProBook 4320s
Hewlett-Packard Company	ProBook 4340s
Hewlett-Packard Company	ProBook 6550b
Hewlett-Packard Company	QV985AV-AAHS

## REVISIONS

Version	Print Date	Revision
-	July 2013	First edition
A	March 2014	" 4. Personal computers that do not stop QnPRHCPU with error " has been added.

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