RC-G4B
RC-G8B

Instruction Manual

1st Edition

SUISEI ELECTRONICS SYSTEM CO., LTD.

Thank you for choosing RC-G4B/RC-G8B.
If you have any inquiry regarding the product, please contact us or our sales agency.
For your information, the content of this manual may change without prior notice.
Please check our website for the latest information; http://www.suisei.co.jp.

1st Edition : issued in March 2018

- This product is a writing device only for one chip microcomputer with built-in flash ROM,EPROM and onetime PROM produced by Renesas Electronics Corporation. If can not be used for writing to other devices and for other purposes.

- Warranty period for this product is one year after from the date of the purchase. Fault(s) cause by the defect(s) in manufacturing will be repaired without charge during this period. Please notify the local distributor or us.
  Please note a fault of the consumables such as a socket and a switch will be repaired at your expense. A fault of MCU device written by this product and an error caused by the fault accordingly will not be warranted.

- In case this product is used for mass production, please make sure to consider usage environment, etc. in advance by yourself and to check the reliability.

- In case this product is used in Japan, Electrical Appliance Regulations and electromagnetic interference measures will not be applied.
  This product obtains neither safety standard such as UL nor standard such as IEC. Please be aware of this point when you bring it outside Japan.

- The content written in this manual may be revised without notice on account of performance improvement, etc.
  Our has used reasonable care in preparing the information included in this document, but our does not warrant that such information is error free. Also our assumes no liability whatsoever for any damages incurred by you resulting from errors in or omissions from the information included herein.

- For enquiries on the content of this manual and the software, please　contact the following.
  For inquiries we will accept by e-mail.

To　6-5-24, Tsurumi, Tsurumi-ku, Osaka City 538-0053, Japan
Suisei Electronics System Co.,Ltd.
E-mail : support@suisei.co.jp
http://www.suisei.co.jp/

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1. Overview

RC-G4B/RC-G8B is a gang write unit that uses EFP-RC2 or EFP-LC and EFP-RC serial MCU programmers (Hereinafter EFP body) to connect 1 to 8 units.

By using RC-G4B/RC-G8B, you can write and read at the same time up to 4 or 8 Renesas Electronics flash memory built-in MCU and QzROM built-in MCU.

Figure 1.1 shows the outline drawing of RC-G4B, and Figure 1.2 shows the outline drawing of RC-G8B.

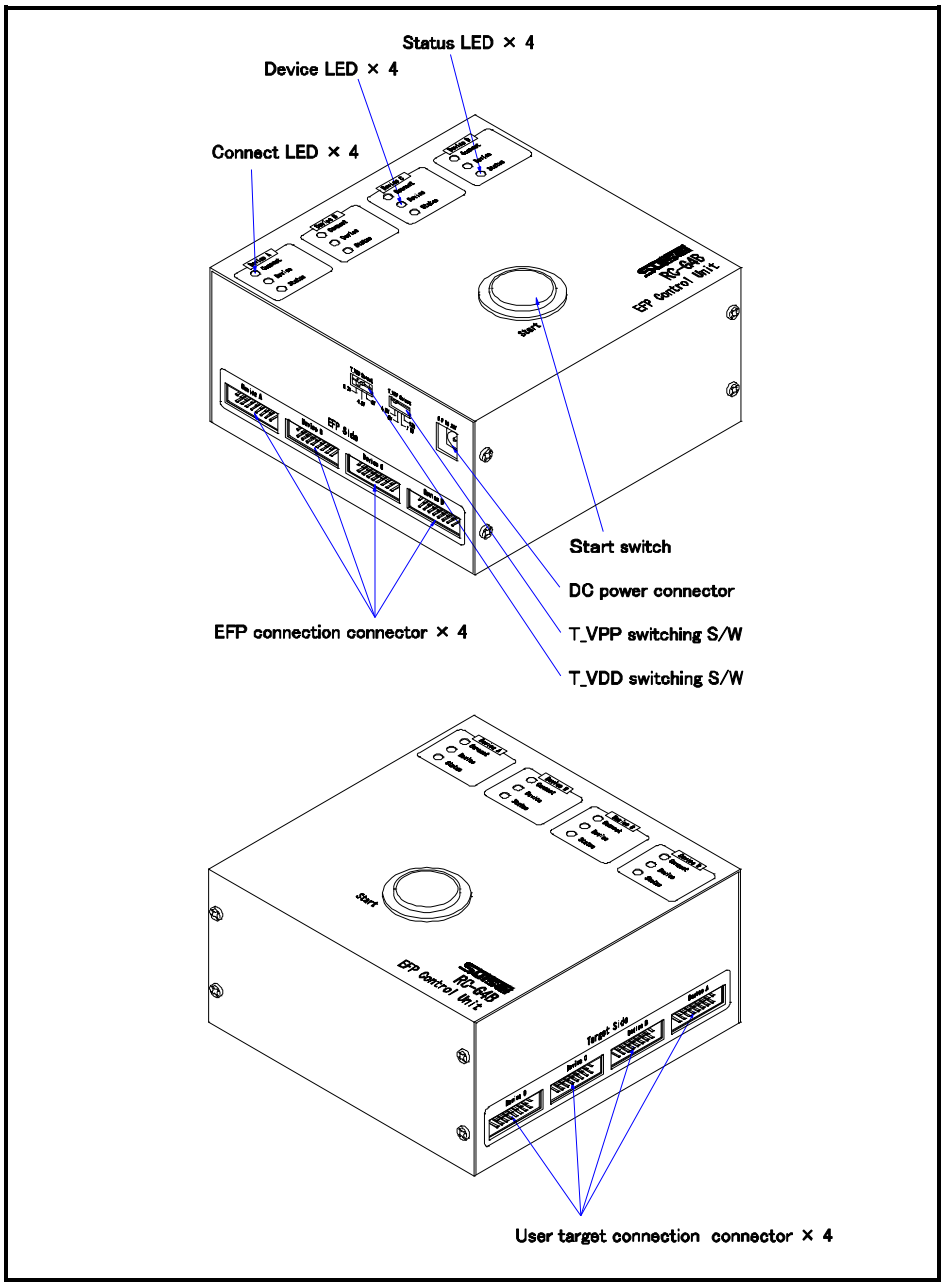


Figure 1.1 RC-G4B External Figures

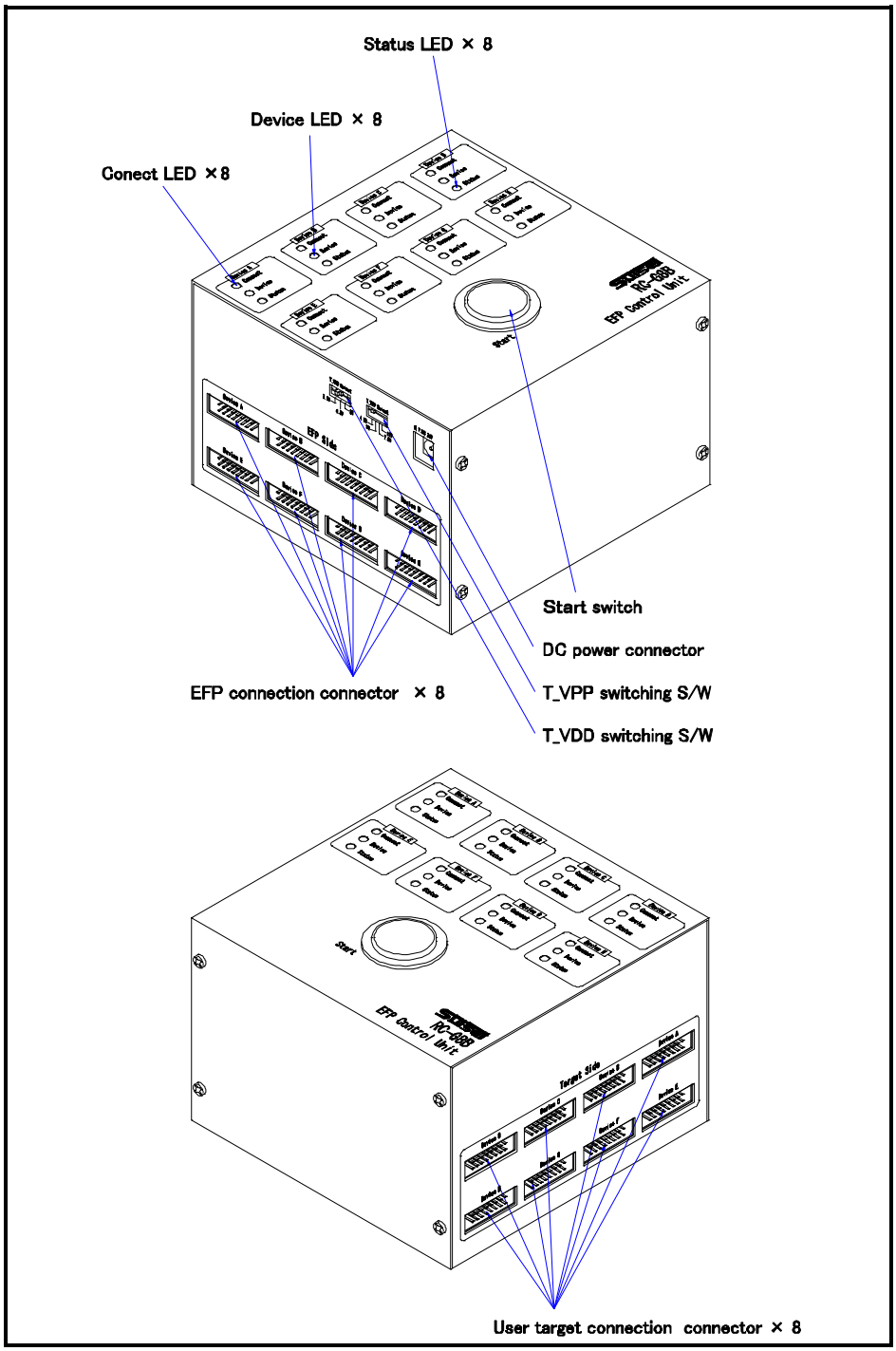
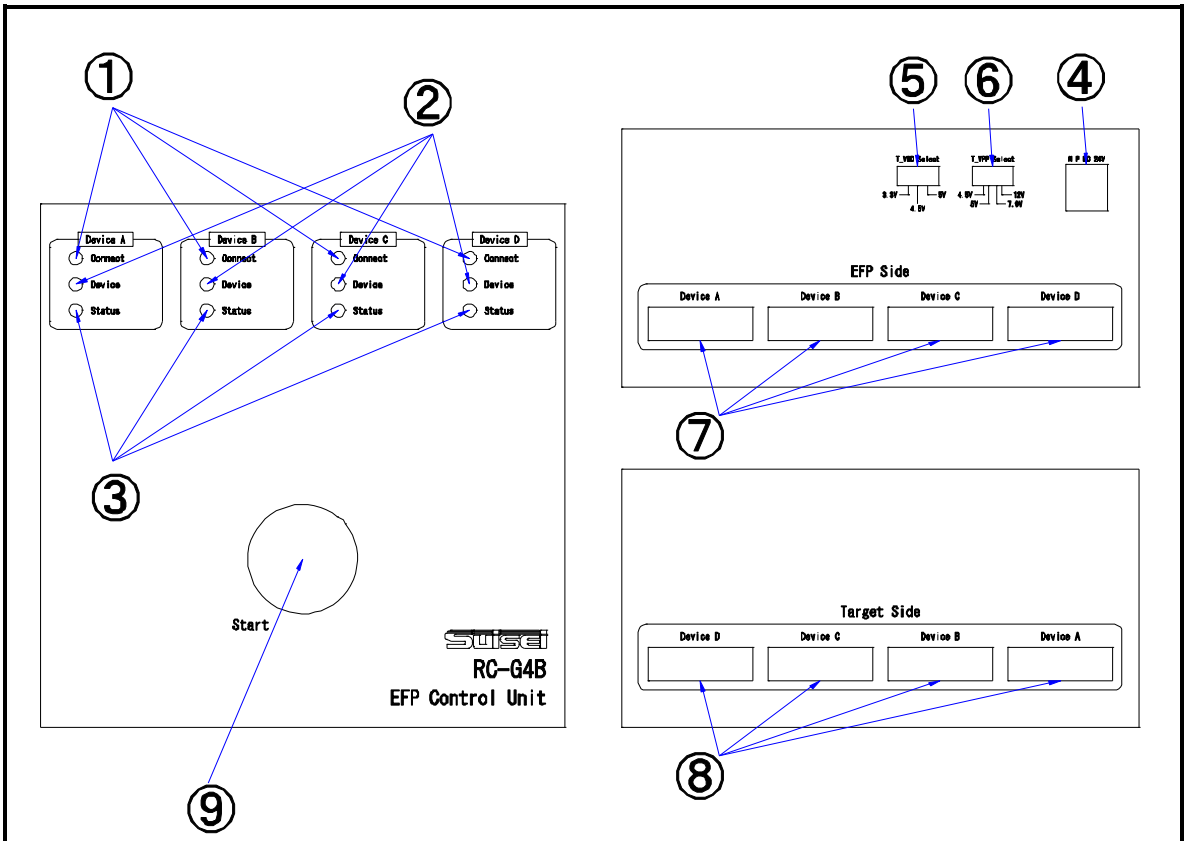


Figure 1.2 RC-G8B External Figures

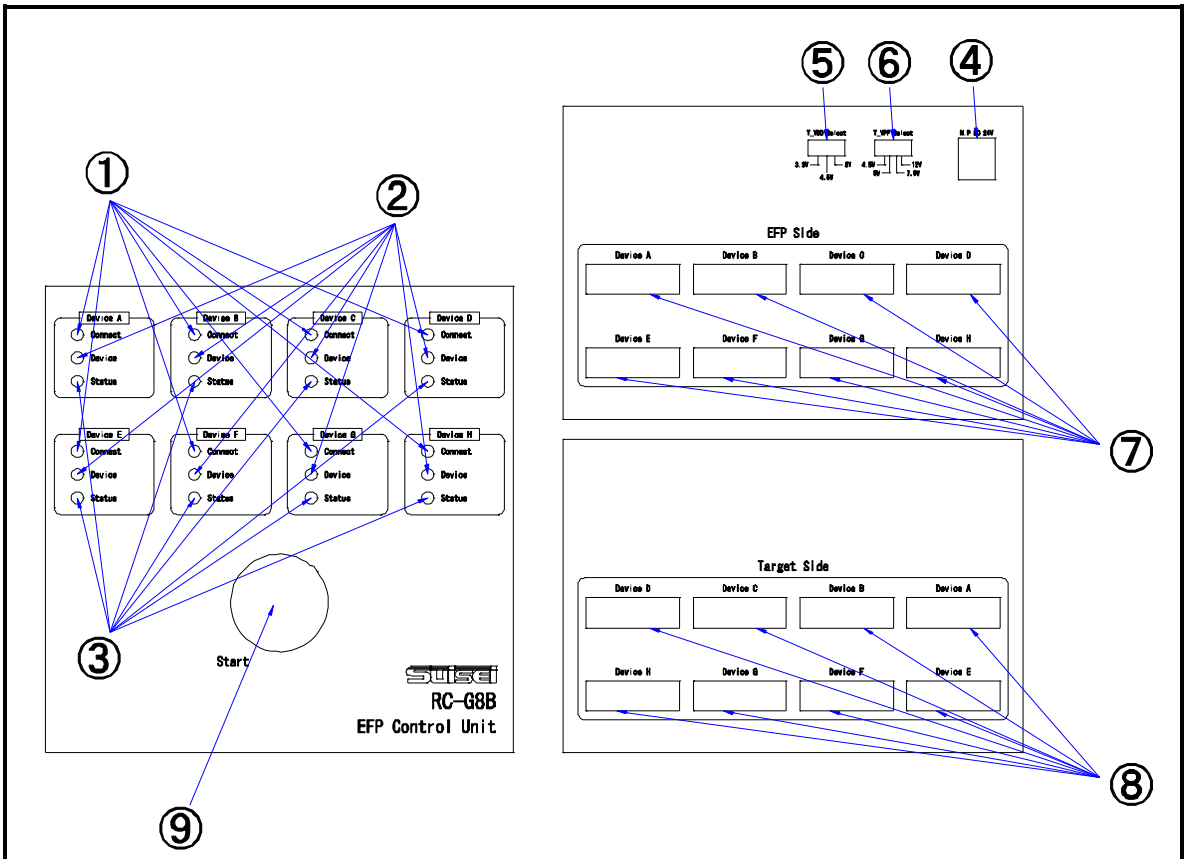
2. Panel name, function description

The names and functional descriptions of each LED, switch, and connector are shown in Figure 2.1 and Figure 2.2.



Mark	Name	Content
1	Connect LED (Green)	Lights when the EFP body is connect.
2	Device LED(Orange)	Lights up when device command is executed.
3	Status LED (Red/Green)	When the result of device command execution ends normally, it will light up in "green". When device command execution result ends in error, it lights up in "red".
4	Power Connector	It provides DC17.5V to 24V from outside.
5	T_VDD Voltage Setting Switch	Voltage setting switch of T_VDD to be supplied to user target. It is possible to set the voltage of T_VDD to 3.3V, 4.5V, 5V.
6	T_VPP Voltage Setting Switch	Voltage setting switch of T_VPP to be supplied to user target. It is possible to set the voltage of T_VPP to 4.5V, 5V, 7.9V, 12V.
7	EFP body Connection Connector	Connects EFP body, using EF1TGCB-16W16W.
8	User Target Connection Connector	Connects user target, using target connection cable.
9	Start Switch	It is an operation start switch. It is connected to the external start input terminal of each EFP body.

Figure 2.1 RC-G4B Panel Figure

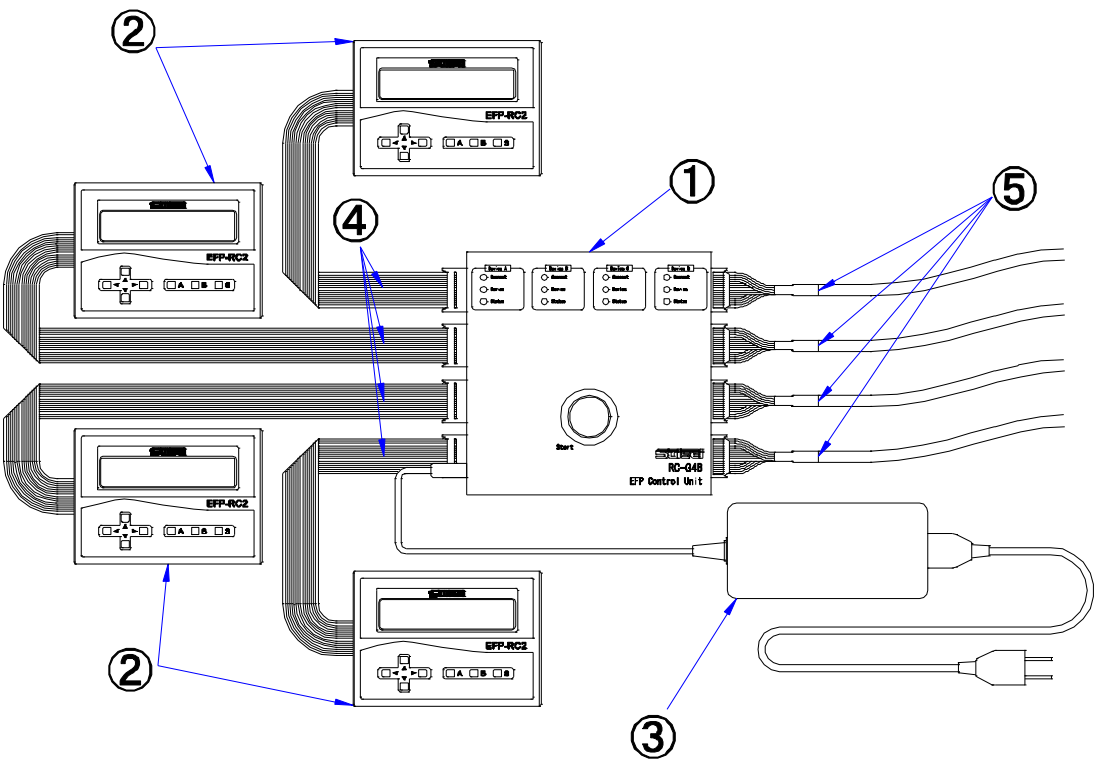


Mark	Name	Content
1	Connect LED (Green)	Lights when the EFP body is connect.
2	Device LED(Orange)	Lights up when device command is executed.
3	Status LED (Red/Green)	When the result of device command execution ends normally, it will light up in "green". When device command execution result ends in error, it lights up in "red".
4	Power Connector	It provides DC17.5V to 24V from outside.
5	T_VDD Voltage Setting Switch	Voltage setting switch of T_VDD to be supplied to user target. It is possible to set the voltage of T_VDD to 3.3V, 4.5V, 5V.
6	T_VPP Voltage Setting Switch	Voltage setting switch of T_VPP to be supplied to user target. It is possible to set the voltage of T_VPP to 4.5V, 5V, 7.9V, 12V.
7	EFP body Connection Connector	Connects EFP body, using EF1TGCB-16W16W.
8	User Target Connection Connector	Connects user target, using target connection cable.
9	Start Switch	It is an operation start switch. It is connected to the external start input terminal of each EFP body.

Figure 2.2 RC-G8B Panel Figure

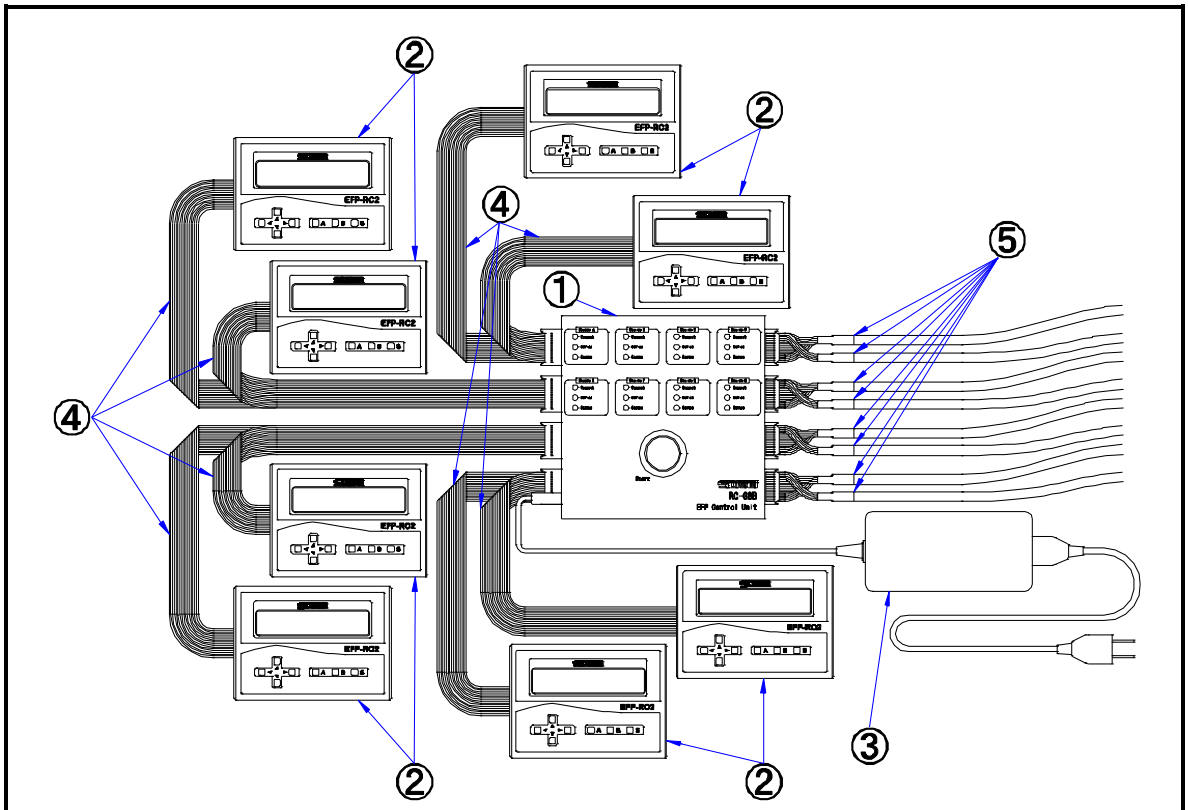
3. How to connect

Figure 3.1 and Figure 3.2 show how to connect the RC-G4B and RC-G8B.



Mark	Name	Content
1	RC-G4B	RC-G4B main body
2	EFP-RC2	EFP-RC2 main body (EFP-LC, EFP-RC can also be used.)
3	Power adapter	output : 19V, Current volume : 3.2A
4	EF1TGCB-16W16W	Connection cable between EFP-RC2 and RC-G4B, Both sides 16PinCN processing
5	Target connection cable	Connection cable between RC-G4B and user target, One side 16pinCN processing
″3″ to ″5″ are included in RC-G4B of ″1″. (″5″ comes with EF1TGCB-16WX) Please prepare other products separately.		

Figure 3.1 RC-G4B Connection diagram



Mark	Name	Content
1	RC-G8B	RC-G8B main body
2	EFP-RC2	EFP-RC2 main body (EFP-LC, EFP-RC can also be used.)
3	Power adapter	output : 19V, Current volume : 3.2A
4	EF1TGCB-16W16W	Connection cable between EFP-RC2 and RC-G8B, Both sides 16PinCN processing
5	Target connection cable	Connection cable between RC-G8B and user target, One side 16pinCN processing
″3″ to ″5″ are included in RC-G4B of ″1″. (″5″ comes with EF1TGCB-16WX) Please prepare other products separately.		

Figure 3.2 RC-G8B Connection diagram

3.1 Notes

Note1 : Please connect RC-G4B/RC-G8B and EFP body with the power supply turned off.

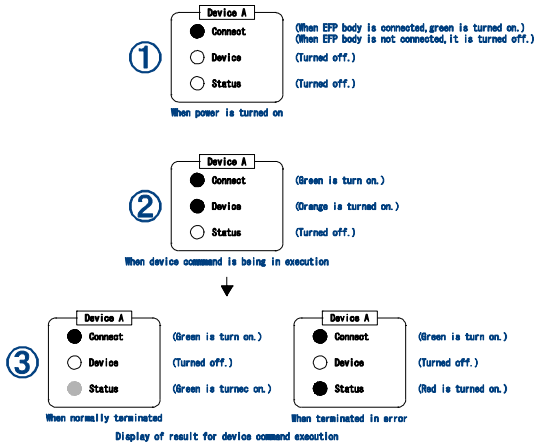
Note2 : When the Device LED (Orange) of the RC-G4B/RC-G8B is lit, the connection cables to the EFP body and the user target board is energized, so do not insert / eject cables.

Note3 : Power off the RC-G4B/RC-G8B and EFP body before removing the EFP body and the RC-G4B/RC-G8B.

Note4 : Power supply to EFP body and user target is supplied from RC-G4B/RC-G8B.
The supply current to the user target is 50mA.

4. Lighting pattern of Displayed LED

Figure 4.1 shows lighting pattern of displayed LED.

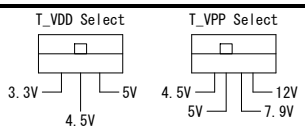


No.	Operation	LED Name	Content
1	When power is turned on	Connect	When EFP body is connected, "green" is turned on. When EFP body is not connected, it is turned off.
		Device	Turned off.
		Status	Turned off.
2	When device command is executed	Connect	"Green" is turned on.
		Device	"Orange" is turned on.
		Status	Turned off.
3	After device command is executed	Connect	"Green" is turned on.
		Device	Turned off.
		Status	If normally terminated, "green" is turned on. If terminated with an error, "red" is turned on.

Figure 4.1 Lighting Pattern of Displayed LED

5. T_VDD and T_VPP voltage setting switches

Figure 5.1 shows silk figure of T_VDD and T_VPP voltage setting switch.



Name	Content
T_VDD Select	This is a voltage setting switch of T_VDD supplied to user target. Voltage of T_VDD can be set to 3.3V, 4.5V, or 5V. Please set 4BitQzROM to 4.5V and 8BitQzROM to 5V.
T_VPP Select	This is a voltage setting switch of T_VPP supplied to user target. Voltage of T_VPP can be set to 4.5V, 5V, 7.9V or 12V. Please set both 4BitQzROM and 8BitQzROM to 7.9V.

Figure 5.1 Silk Figure of T_VDD and T_VPP voltage setting switch

Note1 : When Device LED (orange) of RC-G4B/RC-G8B main body is turned on, please do not switch over T_VDD and T_VPP voltage setting switch.

6. Connector for user target connection

Figure 6.1 shows pin allocation figure of user target connection connector.
Table 6.1 shows terminal table of user target connection connector.

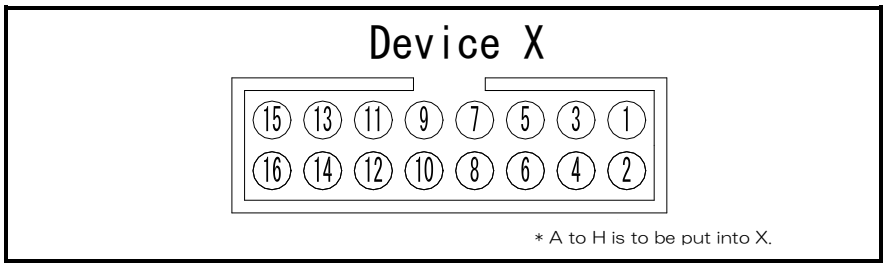


Figure 6.1 Pin allocation figure of target connection connector

Table 6.1 Terminal table of user target connector

Pin NO.	Terminal Name	Input - Output	Explanation
1	GND		GND
2	(N.C)	—	
3	T_VPP	Output	Target writing power output. 4.5V, 5V, 7.9V or 12V.
4	T_VDD	Output	Target power output. 3.3V, 4.5V or 5V.
5	(N.C)	—	
6	(N.C)	—	
7	(N.C)	—	
8	T_PGM/OE	Output	Target writing-reading pulse.
9	T_SCLK	Output	Clock for synchronous communications
10	T_TXD	Output	Serial send data
11	T_RXD	Input	Serial receive data
12	T_Busy	Input	Target busy signal
13	(N.C)	—	
14	T_Reset	Output	Target reset control signal
15	(N.C)	—	
16	GND		GND

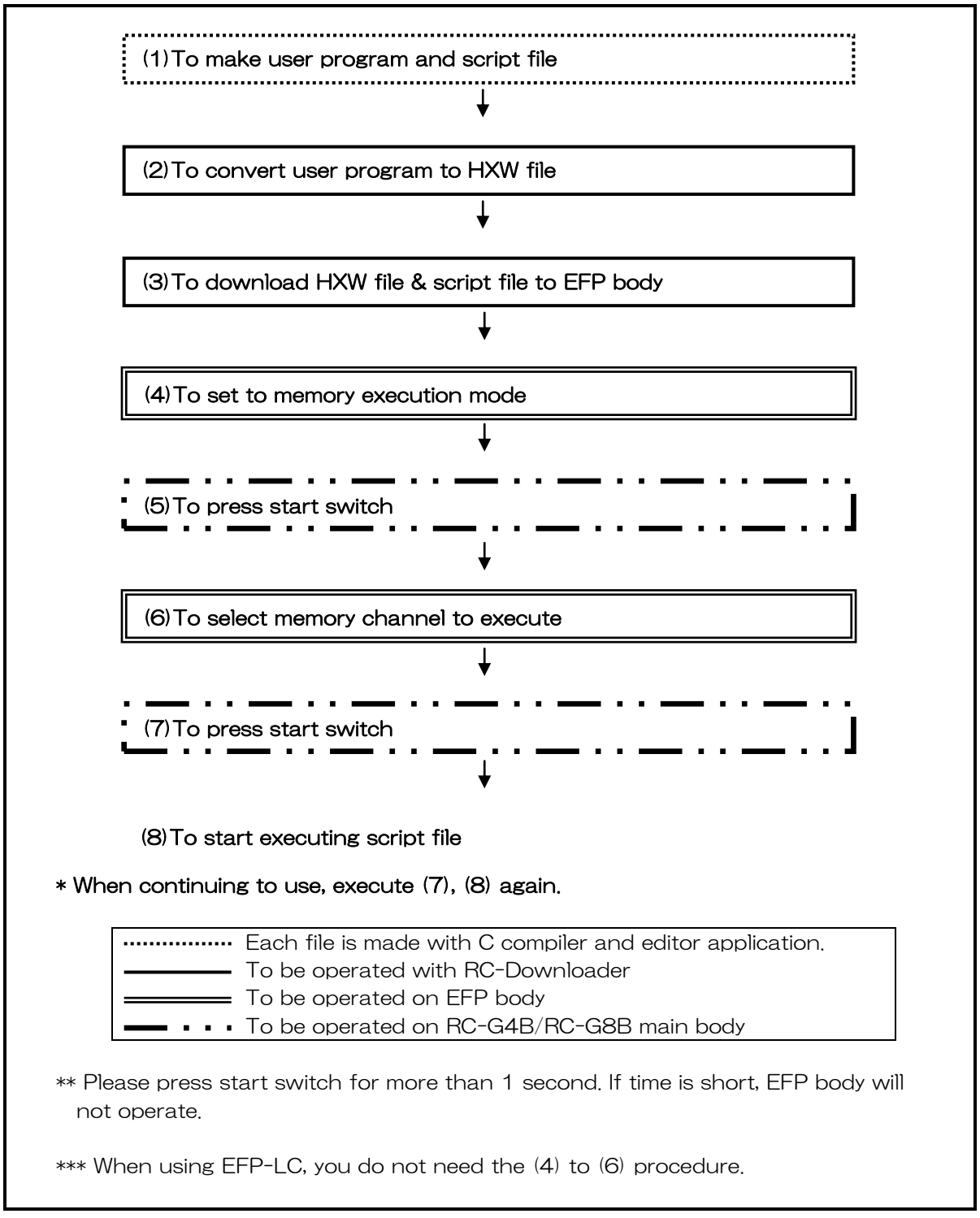
Note1 : I/O is the direction from RC-G4B/RC-G8B.

7. How to operate

Below are a series of operation methods of RC-G4B/RC-G8B.

When EFP-RC2 or EFP-RC is used for RC-G4B/RC-G8B, it is necessary to set to memory execution mode.

How to set the memory execution mode is described in the following items.
*EFP-RC2 : ″EFP-RC2 Instruction Manual ’5.9 How to use user memory files’ ″
*EFP-RC : ″EFP-RC Operation Manual ’ ″S″ key operation at menu’ ″



** Please press start switch for more than 1 second. If time is short, EFP body will not operate.

*** When using EFP-LC, you do not need the (4) to (6) procedure.

8. Specifications

Table 8.1 Specifications

External dimensions (Protruding parts not included)	RC-G4B	140(W)×140(D)×70(H) [mm]
	RC-G8B	140(W)×140(D)×95(H) [mm]
Weight	RC-G4B	About 879 g
	RC-G8B	About 1091 g
Supported programmer	EFP-RC2、EFP-LC、EFP-RC	

8.1 Notes

Products of the following serial No. can not be used with this device.

* EFP-LC : Products before R2D00091 (products shipped before April 2012)
* EFP-RC : Products before 5A00049 (products shipped before February 2005)