

# Flash Memory Programming Adapter Setup Manual

## 1 Preface

Thank you for purchasing the flash memory programming adapter. The flash memory programming adapter can be used for flash memory programming of NEC ELECTRONICS on-chip flash memory microcontrollers in combination with the flash programmers PG-FP4-E, PG-FP5-EE and QB-MINI2-EE. Please entirely read this document first; you will obtain an overview of information on preparation for using the flash memory programming adapter, start-up, support and so on.

### <1> Checking the package contents

Check the package contents in accordance with the packing list supplied with the flash memory programming adapter. If there are any missing or damaged items, consult a NEC ELECTRONICS sales representative or distributor.

<2> Nomenclature of the order code      FA-xxx $\gamma$ y-zzz-B,  
 xxx:    pin count, no. of pins  
 $\gamma$ y-zzz: package type  
 e.g. FA-144GJ-GAE-B

### <3> Flash memory programming adapter documentation

NEC ELECTRONICS documentation for the flash memory programming adapter is available on the following website (hereinafter referred to as TOOLWEB):

<http://www.eu.necel.com/update>

and select FA-ADAPTER from the ORDER CODE list box. Use of the latest version of the documentation is recommended.

## 2 Programming procedure

### <1> Signal connections

Wire the required signals of the programmer-side terminals P2 (SI, SO, SCK, X1, X2, /RESET, VPP, H/S, FLMD0, FLMD1), clock terminals (X1, X2), power supply terminals (VDD, VDD2, GND) and the microcontroller-side terminals SP (periphery of the IC socket). Please use only isolated wire for soldering. Please refer to the User's Manual of the target device for the required connections:

<http://www.eu.necel.com/docuweb>

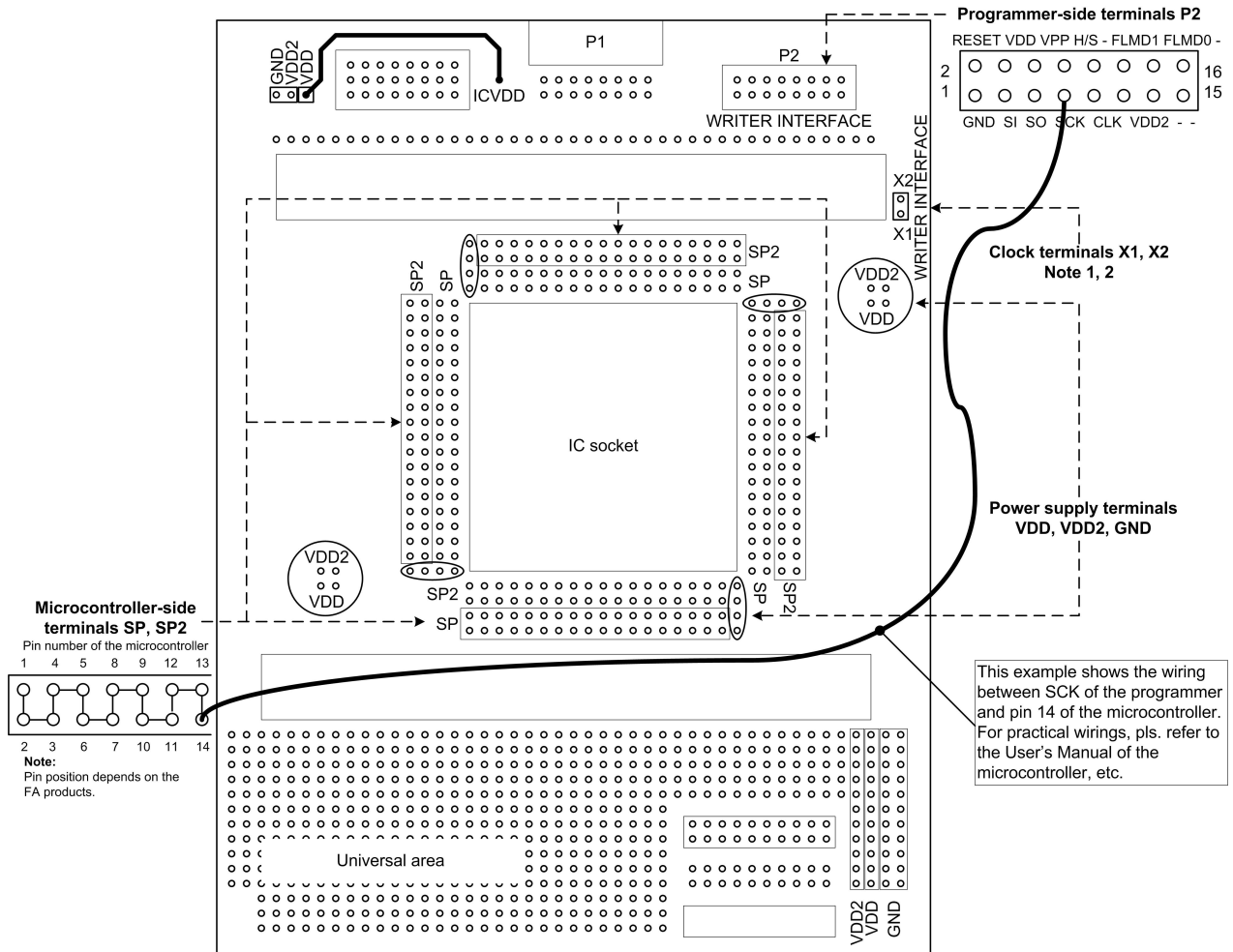
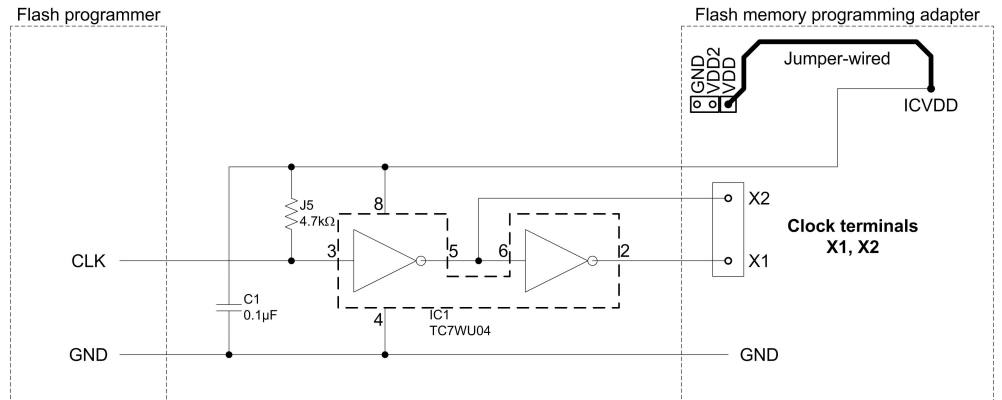


Figure 1 - Flash Memory Programming Adapter

**Notes:**

1. The following clock circuit is mounted on the flash memory programming adapter. If the reversed X1, X2 signals are required, the clock terminals X1, and X2 should be used. The power supply of the TC7WU04 is jumper-wired to VDD. Please change this wiring if necessary.
2. If the specification of the microcontroller requires the mounting of the oscillator or capacitor and the use of the IC other than 74HCU04 (TC7WU04), create the required circuit on the universal area.
3. If an interface signal level conversion is required, create the required circuit on the universal area.
4. For termination of unassigned terminals, pls. refer to the User's Manual of the target device:

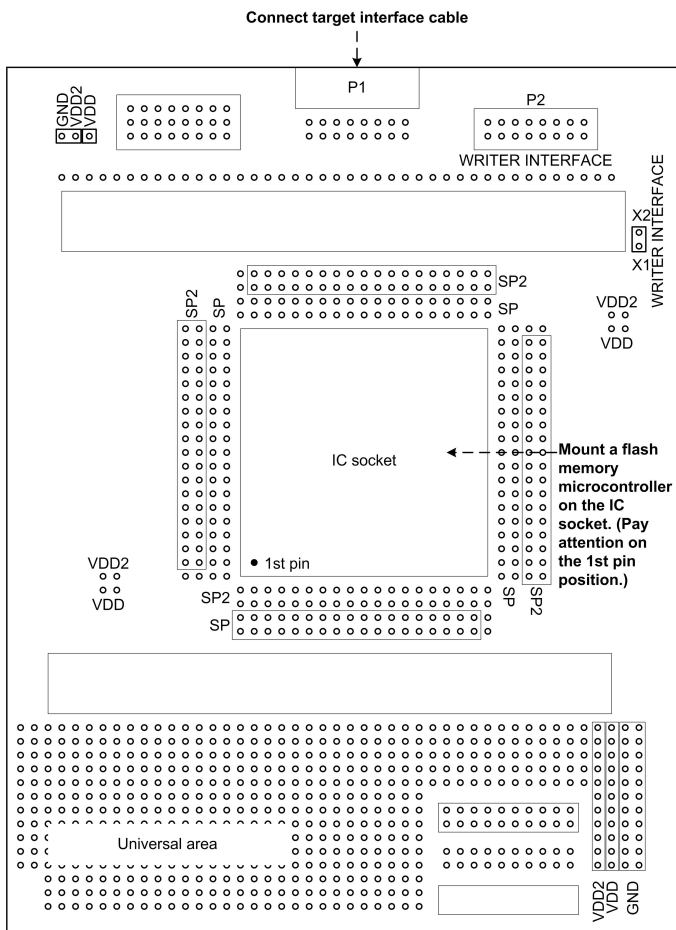
<http://www.eu.necel.com/docuweb>



**Figure 2 - Clock Circuit for X1, X2 Signal Generation**

**<2> Programmer connection**

Connect the target interface cable of the flash programmer to the target connector P1.



**Figure 3 - Flash Memory Programming Adapter Target Connection**

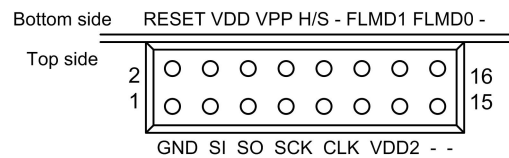
**<3> Connector signal table**

The following table shows the signal names of the target connector P1 and the programmer-side terminal P2.

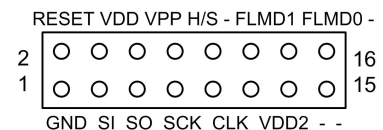
P1 connector	P2 connector	Signal name
1	1	GND
2	2	/RESET
3	3	SI
4	4	VDD
5	5	SO
6	6	VPP
7	7	SCK
8	8	H/S
9	9	CLK
10	10	(VDE)*
11	11	VDD2
12	12	FLMD1
13	13	(RFU-1)*
14	14	FLMD0
15	15	(Not used)*
16	16	(Not used)*

Signals marked with (...) \* are defined as unused for the user.

**Target connector P1 (Connector pin view)**



**Programmer-side terminals P2 (Top view)**



**Information**

For further information or questions, please contact NEC Electronics (Europe) via [www.eu.necel.com/contact](http://www.eu.necel.com/contact)

**<1> Troubleshooting**

In case of problems, please see the FAQ on the website, or access the following URL for consulting: [www.necel.com/en/contact/contact\\_e.html](http://www.necel.com/en/contact/contact_e.html)

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