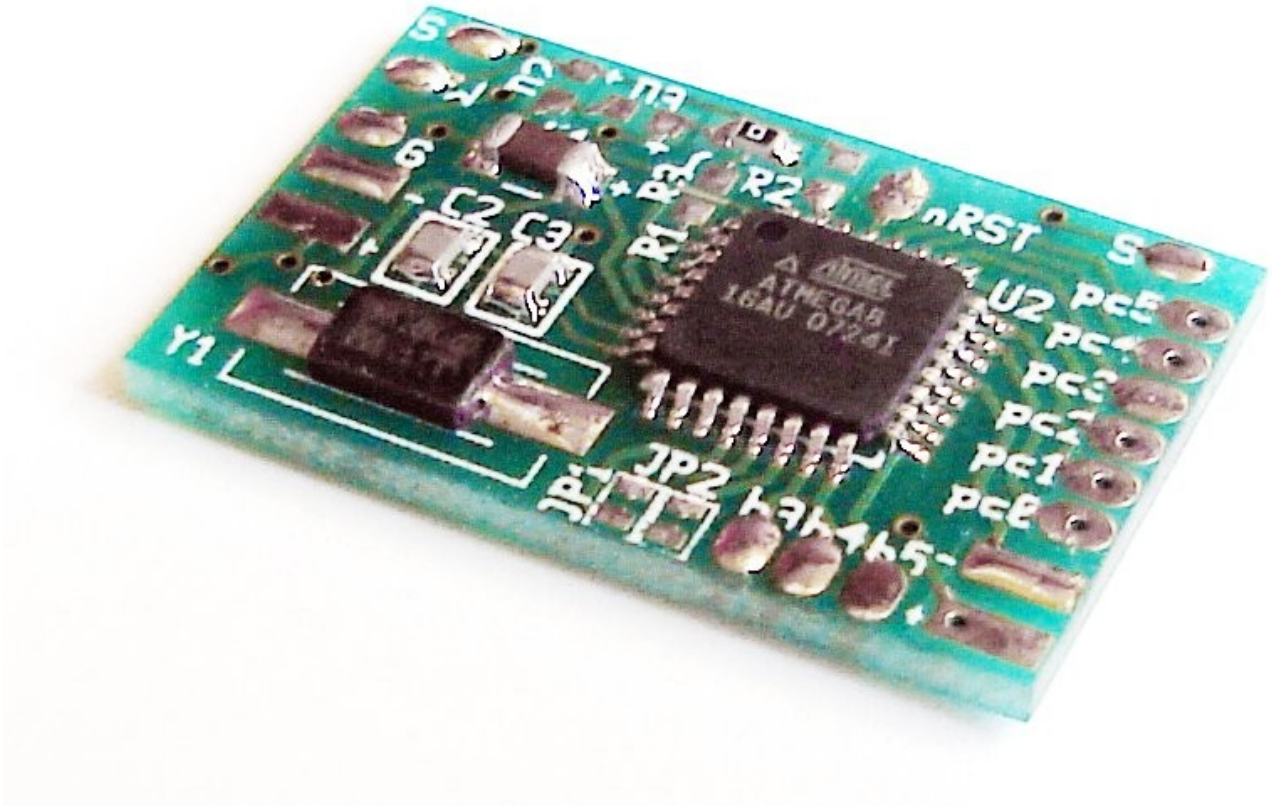
raphnet technologies

N64 to GC/Wii

Pre-assembled PCB

(part no. #N64TOGCWPCB1)



Manual

English version

Table of Contents

1) Introduction

1.1) Product summary

This small circuit converts N64 compatible game controllers to the Gamecube/Wii controller protocol. It can be installed inside a controller or can be used to build an adapter.

1.2) Supported consoles

At the moment, the adapter is known to work on the following setups:

- Gamecube games on Gamecube
- Gamecube games on Wii
- Wii virtual console games
- raphnet.net N64/GC to USB adapter.

1.3) Supported controllers

The circuit supports Nintendo 64 compatible[*1] controllers.

**1: Tested with an original grey controller and a third party controller (both wired).*

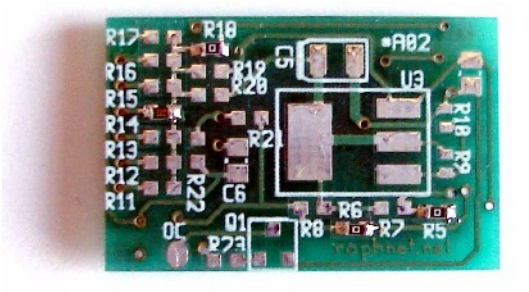
***Compatibility note**: There are very good chances that the circuit supports controllers other than those it was tested with. Please let me know about your success with other types.*

2) Getting started

2.1) What you should have received

1. One PCB with 6 components installed on the top layer and 4 components on the bottom layer.

Top layer



Bottom layer

2.2) Required material (not included)

1. Soldering equipment.
2. Basic electronic tools. (cutters, wire stripper, tweezers)
3. Multimeter for testing continuity.
4. Gamecube connector. eg: Controller cable or controller extension.
5. If you plan to build an adapter (instead installing the circuit inside a controller), you will need a connector that mates with your N64 controller. This can come from an extension cord or a (broken) console.
6. If building an adapter, some kind of enclosure to protect the circuit is highly recommended. This is especially important to prevent the circuit from coming in contact with anything metallic such as a computer case. This could cause a short circuit which could likely cause damages to the circuit and/or your computer, depending on circumstances.

2.3) Recommended equipment

1. Desoldering braid (just in case)
2. Hot glue gun and Hot glue (to prevent the wires from eventually breaking at the point where they are soldered). Especially important if the wires may bend near their solder point.

2.4) Overview of installation

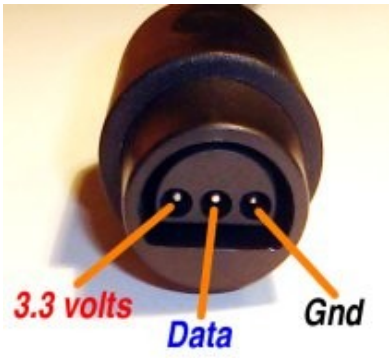
1. Start by carefully planning how you will install the circuit inside the controller (or your enclosure). Make sure you dont cut the wires too short and that the circuit will not be in the way when you put back the cover.
2. Solder the Gamecube wires.
3. Solder the N64 wires.
4. Double check wiring and inspect for shorts. Double-checking with a multimeter is recommended if you have any doubts.
5. Test on a console. This must be done with a controller installed. Otherwise, the adapter just keeps waiting for a controller and will not be detected by the console.
6. Install hot glue over the solder points.
7. Insulate any metal part (e.g. USB cable shield) which could come in contact with the Circuit. Use electric tape or hot glue.
8. Finish the installation. (Close enclosure)
9. Play!

3) Assembly

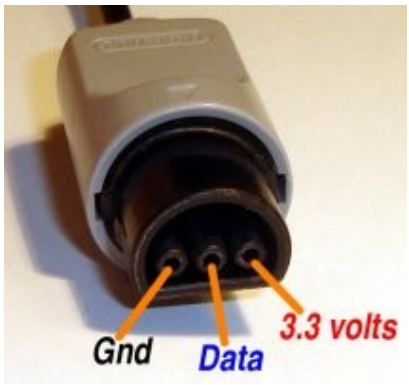
3.1) N64 and Gamecube controller pinout

Due to the high number of different controller and extension brands which use varying color schemes, I cannot provide an universal wiring diagram based on wire colors.

The safest way to find out how to wire your controller or adapter is to figure out the color code yourself with the help of a multimeter and the diagrams below:

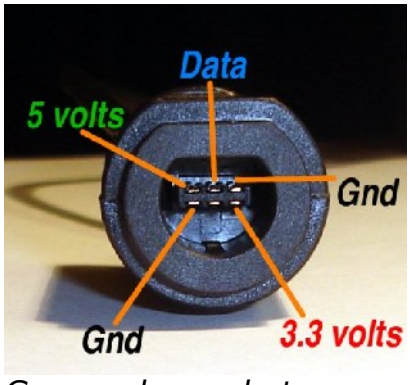


N64 socket pinout (or looking into console)

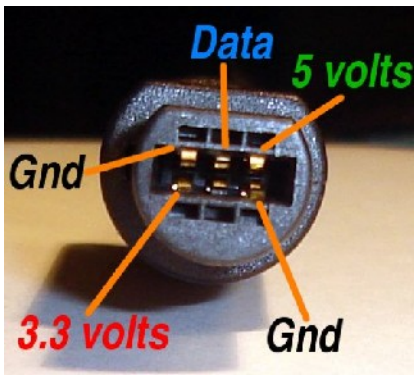


N64 plug pinout (or looking into controller cable)

IMPORTANT: Colors in the diagrams above are **NOT** representative of the wire colors in the cable. Do **NOT** follow this color code.



Gamecube socket pinout (or looking into the console)

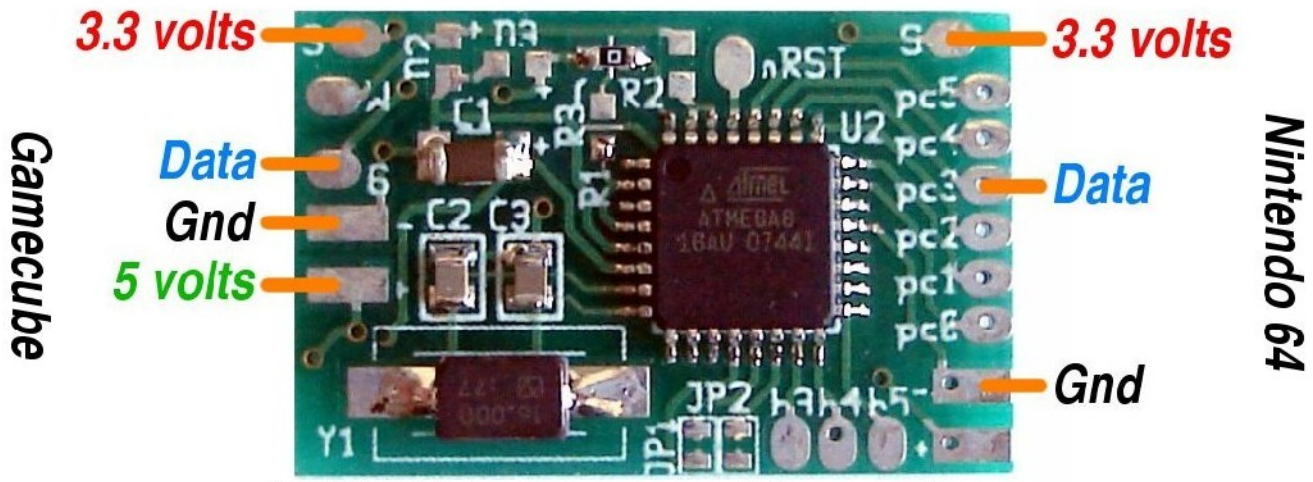


Gamecube plug pinout (or looking into controller cable)

IMPORTANT: Colors in the diagrams above are **NOT** representative of the wire colors in the cable. Do **NOT** follow this color code.

3.2) Soldering controller wires to the PCB

Once you know which wire does what in your cable, solder them to the appropriate locations on the PCB:



IMPORTANT: Colors in this diagram are NOT representative of the wire colors inside the cables. Do NOT follow this color code!

IMPORANT: If your pcb is identified by “#239004 r5” on the bottom side, you must wire the Gamecube data wire on the 'W' pad instead of the 'G' pad as shown in this picture.

Hints:

- Pre-tinning solder points on the PCB and the wires greatly eases soldering.
- Twists the two Gamecube ***Gnd*** wires together and pre-tin them before soldering both of them on the PCB.

4) Copyright, Disclaimer and History

4.1) Copyright

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While I believe that all the information contained in this manual is accurate, should any damage(s) occur due to error(s) in this manual, my responsibility will be limited to replacing my product if it is damaged.

4.3) Revision history

February 17, 2008	First version of this manual.
January 18, 2012	Update for new GC data wiring