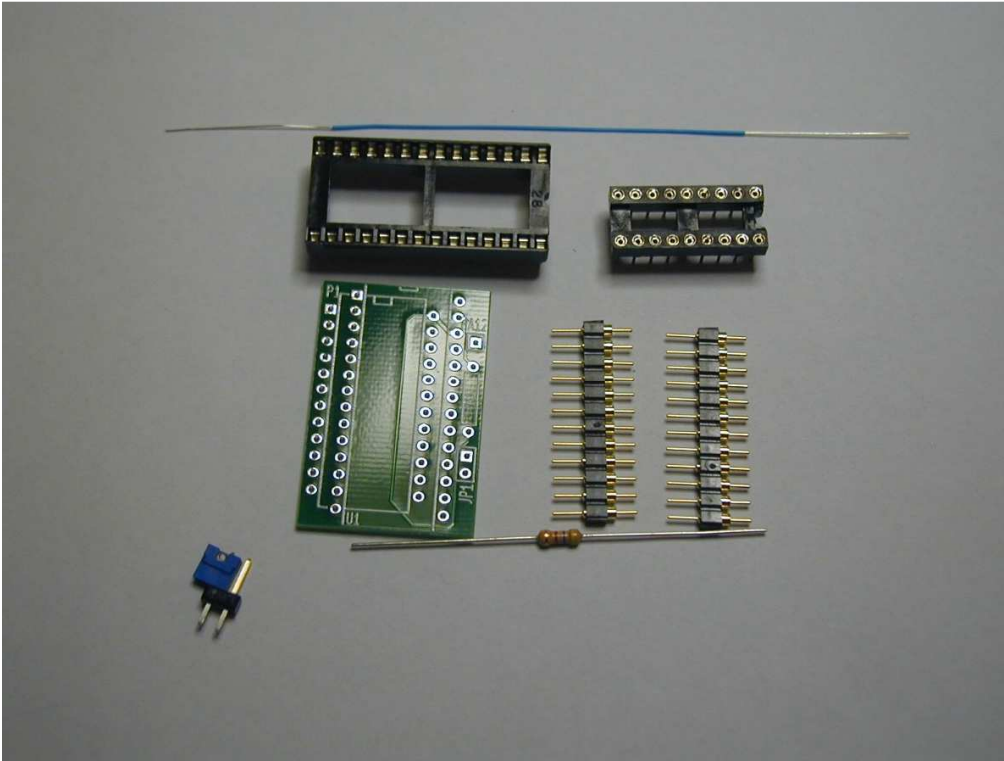


**Important note: This firmware cannot be used in a Jupiter 6 which has the Europa mod installed. The Europa MCU is always running code that is inside the chip, even when you are running the Roland code. It does not use the EPROM at all.**

The Jupiter 6 original firmware resided in a 2732 (4K byte) EPROM. It was completely full, so a small daughterboard has been designed to allow using a larger EPROM to make room for the new features. Here are the parts needed to build up the adapter board:

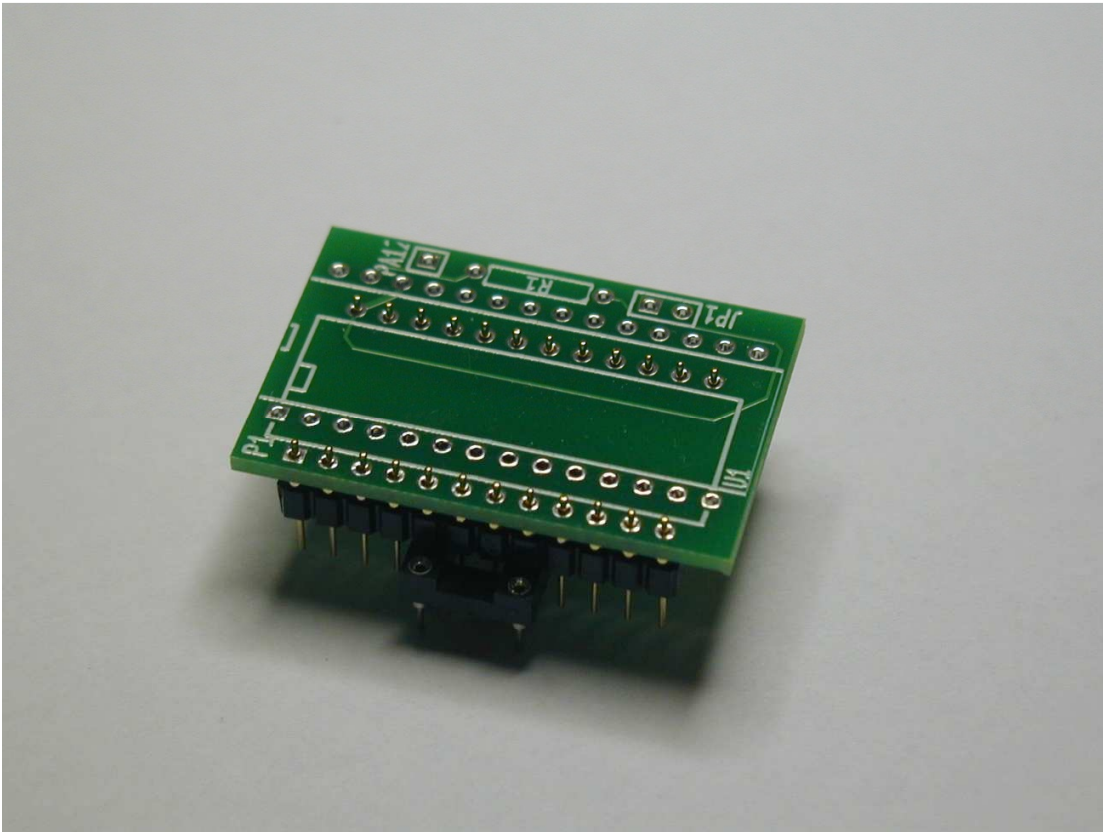


The smaller IC socket is only used during assembly of the board.

The first step is to install the headers on the underside of the board. To insure that the headers are perpendicular to the pc board when soldering, insert them into the small IC socket provided. The headers have thinner pins on one side and thicker on the other. The thinner pins must be inserted (carefully) into the IC socket. Note that it is very easy to break off the header pins. (Two types of headers may be provided which look a little different, so you need to look at the pins to see which are thinner and which are fatter) Place the headers so that they are 0.6" apart, with the thicker pins facing up, as shown below.



Now place the pcb on top of the headers, so that the pins are in the P1 holes, as shown below, and solder them. Just solder two pins first, then check to make sure that the pcb is sitting properly before soldering the rest of them.



Now carefully unplug the headers from the IC socket, and place the 28-pin IC socket in position, with the notch at the end indicated on the pcb. Holding the socket in position, turn the board over and solder it in place.

Install the 4.7K resistor at position R1, and the two-pin male header at position JP1 (with the shorter pins in the pcb holes)

Feed the bare part at one end of the provided short 30-gauge wire into the hole at "PA1" on the top side of the board. Solder the wire on the top side of the board with  $\sim 1/16$ " of bare wire visible between the hole and the insulation. Trim off the excess bare wire on the underside of the pcb.

Cut the bare wire at the far end of the wire so that about  $1/8$ " remains without insulation.

Install the new firmware EPROM in the adapter board IC socket.

Two types of EPROM sockets were used in the Jupiter 6:



The adapter board and headers have been designed to work with either type. The one on the left has machined contacts, while the Yamaichi one on the right has stamped contacts.

Remove the original firmware EPROM from its socket by gently prying between the chip and the IC socket with a small flat-blade screwdriver at both ends. Pry up a little at one end, then a little at the other end, then back to the first end. You want to bring the chip straight up if possible, to avoid bending the pins. Be careful not to pry under the IC socket, as this can damage the pc board. Place the EPROM on a piece of conductive foam, or in the chip tube which the new EPROM came in.

Move the red and blue wires away from the EPROM socket so that they won't interfere with the adapter board.

Insert the adapter pcb header pins into the EPROM IC socket with the notch end of the EPROM closer to the 8051 chip, and once you are sure they are all aligned properly, press it firmly into place. If it is not aligned and you press down on it, the pins will simply bend over and break off.

After you have installed the adapter board, solder the free end of the 30-gauge wire to pin 1 of IC18. Melt a small amount of solder onto the pin first, then add the wire and reheat.

**Do not place the jumper on the adapter board header.** Maybe tape it to the top of the 8051 or somewhere else inside the JP6. When the jumper is installed, the V6 firmware is selected in the EPROM. Without the jumper, the new firmware is selected. So the jumper can be used to answer the question "Did it do that before?" without changing any chips.