circuitbenders.co.uk - KAWAI R-ROM switcher

The Kawai 'R' series of drum machines all share interchangeable sound ROM chips, which means the ROM's can be freely swapped between the R100, R50 and R50e to give each machine the sound set of any other. Theres also a mysteriously rare R50-III version that might have only been available in Japan, but we've never seen one and have no idea which sound ROM it uses.

This kit lets you install all three standard sound ROM's in one machine and switch between them freely. It also has a space for a fourth ROM in case you ever come across a custom sound chip, or one from a R50-III. The sound set is selected using a rotary switch on the front panel.
Sounds cannot be individually selected and mixed between separate ROM's, so you have to use the whole R100 set, or the whole R50 set etc.

The kit can be installed without any soldering, but you will have to drill a hole somewhere to mount the rotary switch on the panel. Bear in mind that it will protrude approximately 14-15mm behind the panel, so make sure that theres enough space when the case is closed wherever you want to put it. We usually mount it in between the cartridge slot and the screen, although god knows why as that does involve moving the output PCB's to get at the inside of the panel. Its definitely a good idea to do some measurements first to make absolutely sure the switch is going to fit where you want to put it so no internal structures or components are going to get in the way.

The standard kit consists of the switcher board with two ROM chips pre-installed, a rotary switch, and a five way connector cable.

IMPORTANT: The same anti-static precautions should be taken when handling ROM chips and the ROM switcher board as you would take when installing computer RAM.

Your drum machine should already have one of the sounds ROM's shown on the left installed in it.

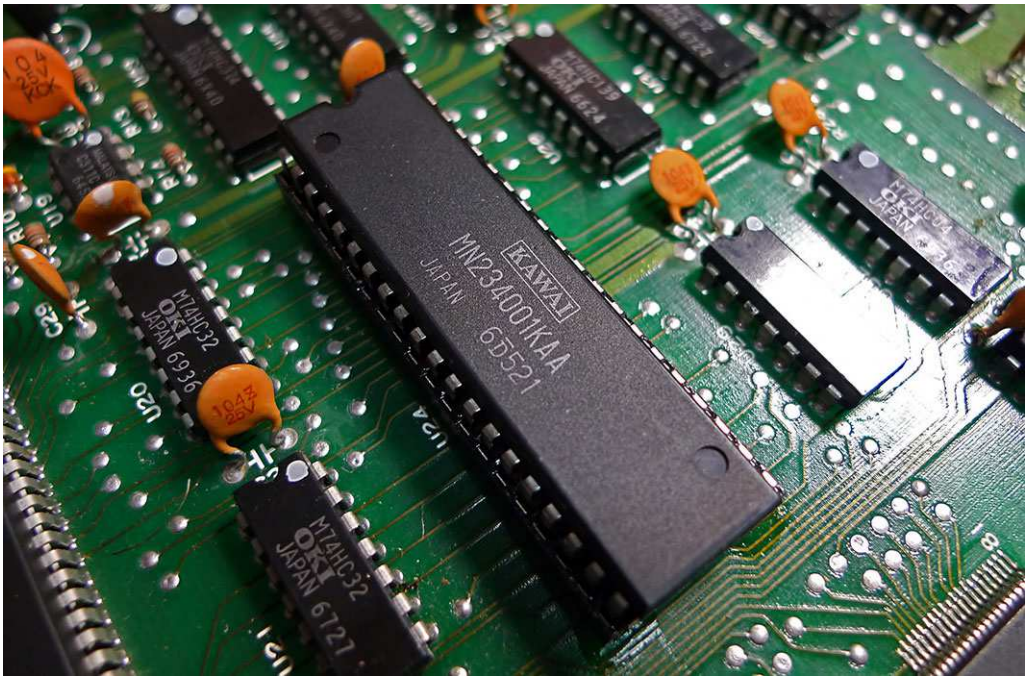
You can identify which ROM you have from the letter at the end of the middle row of characters. From top to bottom the chips shown are ROM C, B and A.

The R100 had ROM A as standard, the R50e had ROM B and the R50 had ROM C. These were sometimes known as CP1, CP2 and CP3 respectively.

If you let us know which ROM you already have at the ordering stage, then your switcher board will already have the other two ROMs installed in it

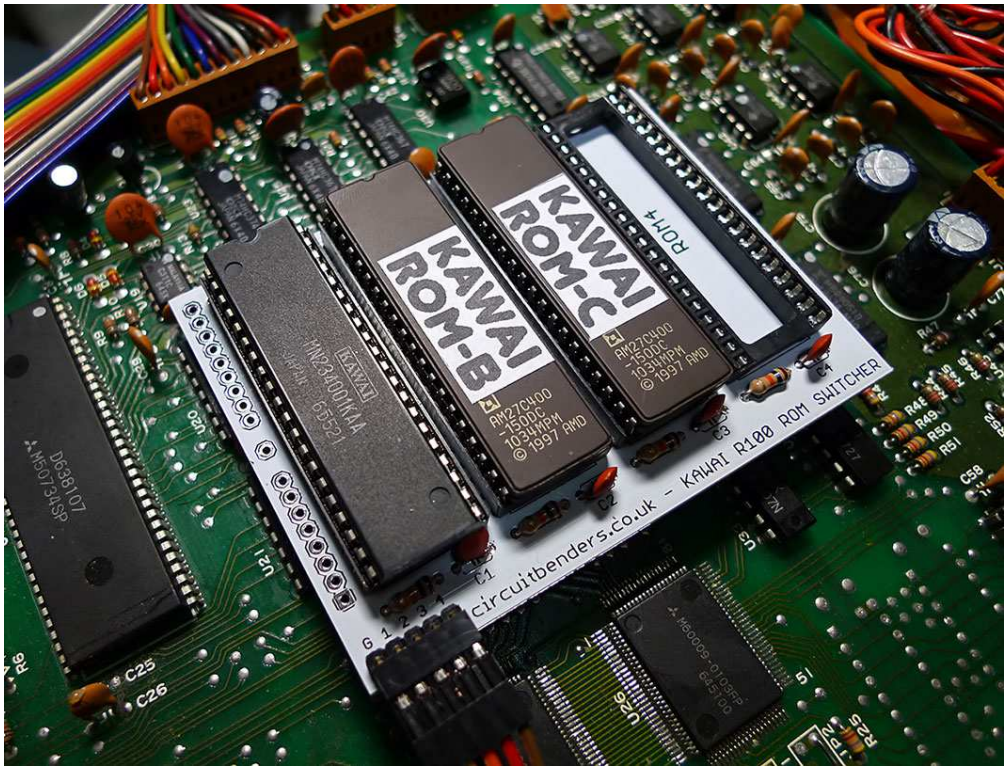
ROM A in the ROM socket on a R100 is shown on the next page. To start installing the kit you need to very carefully lever this chip out of its socket using a small screwdriver or similar. Try to do it in small steps from both ends alternately so you don't end up bending the pins too much, as you will be reusing this chip.

Once you have removed the ROM from its socket, you need to install it in the vacant ROM1, ROM2 or ROM3 socket on the switcher board. Make sure you have it the right way up i.e. all the notches at the top of the chips are at the same end, and be careful that you haven't bent any of the pins under the chip as you push it in.



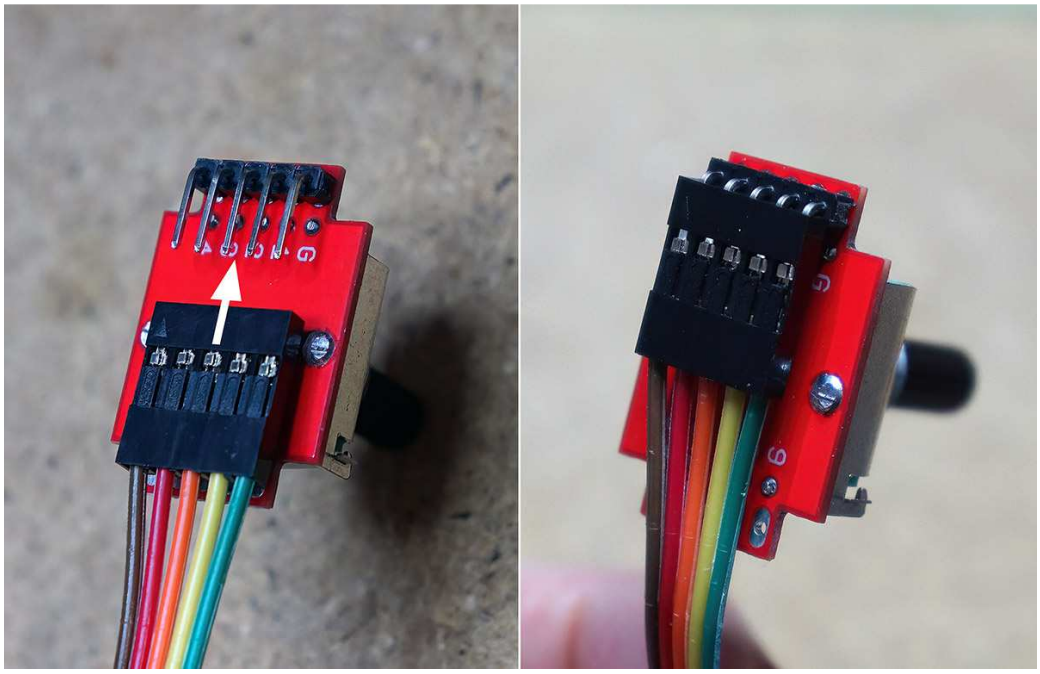
Before you plug the switcher board into the main board, you'll probably have to bend the ceramic capacitors at C32, C44, C47, C48 and C51 as flat to the main board as you can to get them out of the way.

Now just plug the pins on the bottom of the switcher board into the vacant ROM socket on the main board. Its important that you make absolutely sure you have all the pins in the socket.



Plug the connector cable into the 5 pin header at the bottom left of the switcher board, and then plug the other end into the header on the bottom of the rotary switch, making sure that the same colour wires are connected to the same numbered pins at both ends i.e. if a green wire is connected to the

pin labelled G at one end, it should be the same at the other end. It doesn't matter which colour it is or which way up the plug is, as long as the G pin is the **same colour** at both ends.



Positions one to three on the rotary switch should now select sound ROMs 1-3. The fourth position will produce no sound until you put a ROM in the space on the board.

The ROM you are using can be switched at any time, but its only the sounds that change and not the parameter settings All parameters such as pitch, level, panning etc will remain the same regardless of which sound ROM you are using.

We'd advise removing the switcher board again if you want to install or remove ROM's in the future. Attempting it when the board is installed is asking for bent or broken pins!

PLEASE NOTE: The switch is designed to have the knob pointed upwards as shown in the ROM position selection diagram below, so the furthest anti-clockwise position is ROM 1, and the next position in a clockwise direction is ROM 2 etc.