

# Expansion card installation instructions

(for use with Archimedes and R140 computers)

To install an expansion card in the computer you will require an adapter called a 'backplane'. Backplanes are fitted as standard equipment on Archimedes 400 series and R140 computers, and are available separately for the Archimedes 300 series. Full instructions for installing backplanes are supplied with them.

In order to fit the expansion card you will have to remove the lid of the computer unit and one of the blanking plates at the rear of the machine. The only tools you will require for this are No. 1 and No. 2 Pozidriv screwdrivers.

If you do not feel confident about carrying out this installation, take the expansion card and your Archimedes computer to your supplier who will fit the card for you. A charge may be levied by the supplier for installing the expansion card; such a charge shall be entirely at the discretion of the supplier concerned.

## Disassembly

- 1 Switch off the computer at the rear and disconnect it from the mains supply by unplugging the power supply cable. Unplug any peripherals that are attached and remove them from the computer completely.
- 2 Locate the screws holding the top case in place (see Fig. 1 below). Remove the three screws at the top rear of the unit, then remove the single screw located on each side of the unit, towards the front.

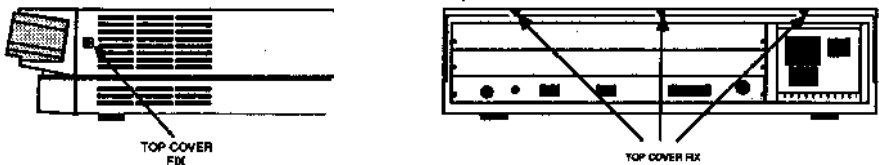


Fig.1: The screws holding the top case.

- 3 Once you have removed the three rear screws and the two side screws, slide the lid of the unit to the rear of the machine, then remove it completely. Slightly spring the sides of the lid outwards, if necessary, to make it easier to slide.
- 4 Check that a backplane is fitted to the computer. The backplane consists of a small printed circuit board mounted vertically on the main PCB. If the backplane is not fitted, then you will have to purchase one and install it, according to the instructions which are supplied with the backplane, before you can continue with

the installation of the expansion card.

The standard backplane fitted to the Archimedes 400 series and the R140 can take up to four single-width or two double-width expansion cards. The optional backplane fitted to the Archimedes 300 series can take up to two single-width or two double-width expansion cards.

- 5 If the backplane is fitted, but has no expansion card socket free, you will have to remove one of the expansion cards in order to install a new one.
- 6 The backplane has upper and lower expansion card slots. These correspond to the two full-width blanking plates fitted to an unexpanded machine. Each blanking plate is held in place by screws, one at each end. Choose the expansion card slot you are going to use, and remove the corresponding blanking plate by unscrewing the two screws holding the plate in position.

You can now fit the expansion card.

### **Fitting the expansion card**

**WARNING:** Some components on expansion cards can be damaged by static electricity. Avoid touching chips on the card.

Before fitting the expansion card, examine it to see whether it is a full-width or a half-width card.

- 1 A full-width expansion card has a plate at the rear which extends the full width of the machine. If the plate on the rear of your expansion card does not extend the full width of the machine, then you are supplied with a blanking plate along with a T-piece and two screws. Use these to make the expansion card up to the full width of the machine.

Once you have made the expansion card backplate up to the correct width, you can install it into the computer. The diagram below shows an expansion card fitting into one of the positions in the computer unit:

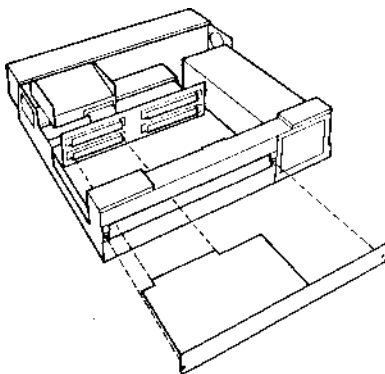


Fig.2 : Fitting an expansion card into the lower slot

- 2 To fit the expansion card, support the backplane firmly with one hand and push the connector on the card into one of the sockets on the backplane. The connector should be securely seated, i.e. the rear plate of the expansion card should be flush with the rear of the computer case. It is important that you offer the expansion card up to the backplane at right angles to it and that you align the connectors; otherwise, you may bend the pins or break or disconnect the backplane itself. It does not require great force to install the expansion card correctly. If the expansion card will not seat easily, remove the expansion card and try again.

When you have fitted an expansion card to your computer, the backplane should be in a vertical position, assuming that the expansion card is fully inserted and screwed into the rear of the computer.

For some combinations of machines and expansion cards, however, the top of the backplane may appear to 'lean' towards the front of the machine.

If this is the case, you must insert the two spacers found in this package. Each spacer should be inserted between the internal face of the expansion card backplane and the metal clips on the rear plastic moulding of the machine, so that the fixing screws pass through both the backplane and the spacers (see Fig.3). This should result in the external face of the expansion card backplane panel being flush with the rear

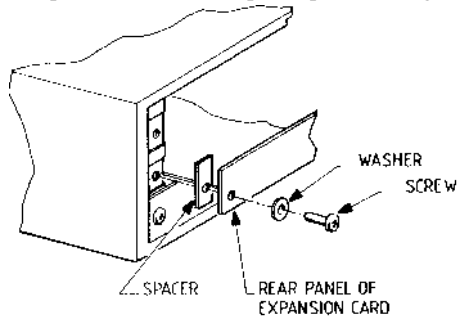


Fig.3 : Fitting spacers to the expansion card backplate

When you have done this, you may need to straighten the backplane, to ensure that the connectors are correctly mated. To do this, take the following steps:

- 1 Slacken off the two screws fixing the backplane support metalwork to the base metalwork and power supply.
- 2 Holding the expansion card stationary, ease the backplane towards a vertical position until the faces of the interlocking connectors on the expansion card and backplane are touching.

3 Retighten the two screws slackened earlier.

If you do not require the two spacers, simply secure the expansion card to the rear of the computer case by inserting a screw at each end of the expansion card backplate.

### **Reassembly**

1 Once the expansion card has been correctly installed, slide the top case of the computer unit on from the rear (make sure you slide it on the right way round - the three notches for the fixing screws go at the back of the computer).

2 Replace the three screws at the rear of the unit and tighten them up. See Fig.1

3 Finally, replace the two screws, one on each side of the case. See Fig.!

The expansion card is now installed. See the documentation accompanying the particular expansion card you have fitted for information on the use of the card.

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