The RAMtest Disc

The RAMtest disc has been developed to check the main memory (RAM) of Amstrad PCW8256/8512 and PCW9512. Problems such as corrupted files, messages like "File checksum error", "Read comparison error" and the appearance of incorrect words or characters when using LocoSpell could all indicate that one or more of the memory chips in your PCW is faulty. (Other messages such as "Disc address mark missing" or "Disc data error" are not indications of a memory error; bur rather that a disc or drive is faulty.)

The RAMtest Disc checks your PCW's memory by running a specially designed test program through all the microchips in the memory bank. This program tests the chips by sending a "pattern" through each chip which should remain unchanged if the chip is working correctly. The results received from each chip are recorded and compared with the expected results. Any differences are then shown on the screen, together with a message summarising the possible faults that the results suggest.

Running the Test

Begin the test by switching on your PCW or, if the machine is already on, pressing [SHIFT] [EXTRA] and [EXIT] together to reset it. Place the RAMtest Disc in Drive A of your PCW, with Side 1 towards the left in the PCW8256/8512 or towards the top in the PCW9512. The RAMtest program will now be loaded onto your PCW.

The program starts by displaying the size of the memory found.

```
RAMtest program v1.0
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Memory size detected - 256k
(If this is wrong you should check the option links)

Do you still wish to perform RAMtests (Y)es (N)o?
```

If you have expanded your memory by using the Isenstein memory board, you'll see an extra message which says that it has found "discontinuous memory". This means that the program has discovered a "gap" in the memory, but this is usual with this board.

Check that the size quoted is correct, particularly if you have a PCW8256 which has had its memory expanded to 512k. If the wrong memory size is shown, this could be caused by the failure to reset the option links after adding extra memory. To see if this is the case, cancel the program by pressing N, switch your PCW off and disconnect it from the mains. Then remove the back of your machine and make sure that the option links are set up according to the instructions supplied with the additional memory. Once you are sure that these are correct, make sure your PCW is completely reassembled before reconnecting it to the mains, switch on and load the RAMtest again.

When your memory size appears to be correct, proceed with the RAMtest by typing Y. The RAMtest program will then start to run one of its test patterns through all the memory chips in turn.

If the memory size remains incorrect this means that your memory has a fault. Running the RAMtest may be able to give more information about this.

Note: A message saying "Non-standard internal memory configuration" could appear at this point. This is unusual and it means there is a fault in the memory banks.

Results of the Test

• *If you see the following message:*

```
No errors were detected by this program

RAMtest program v1.0 finished.
Please replace Ramtest with normal Startup disc. Press space to
reset.
```

This means the RAMtest has not dicovered any faults in the memory. You can now clear the program by pressing the space bar and removing the disc. Re-load LocoScript to begin work.

If your original problem persists, you should think more about the situations in which the fault occurs and other possible causes for the error. If you are still concerned, you should consult either your dealer or a computer specialist.

Sometimes a memory fault can be intermittent as it may be caused by particular circumstances, so it may be worthwhile re-runing the RAMtest program a few times to see if this is the case.

• *If you see a table of numbers followed by a message similar to this:*

```
Problems were found with the memory of this machine
The problem seemed to be in the RAM chip IC112 in the second 256k of
memory, but could possibly be elsewhere in the system.

Do you wish to continue (Y)es (N)o, or (S)kip for tests on the
next pattern?
```

This implies the program has discovered that one of the chips is not responding in the way it is expected to. The screen will show the pattern that was used by the test and the response that was received from the faulty chip. The position of the faulty chip in the memory is reported so it can be found easily.

Option Links   Memory chips
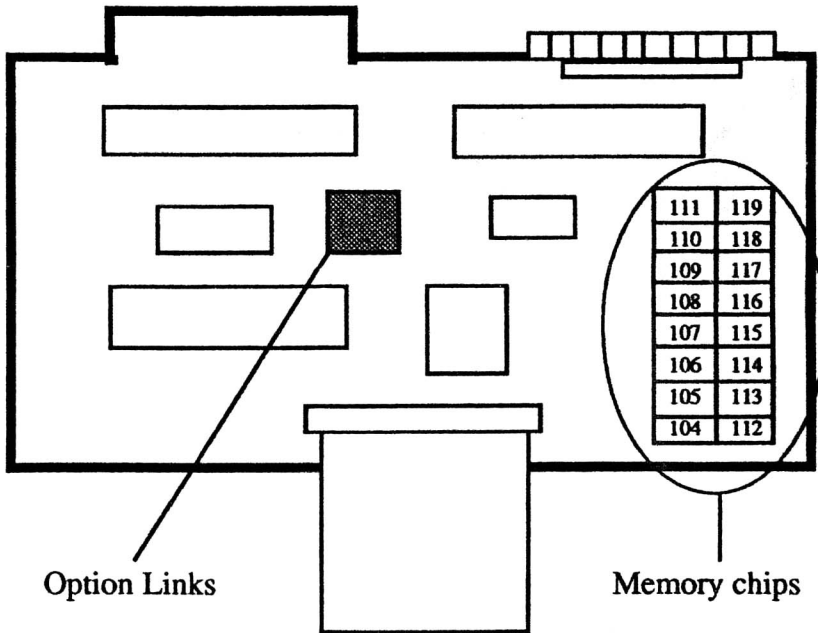
You are also given the choice of continuing with the test by typing Y which will show you more of the test results. Choosing the alternative Skip option will re-run the test using another test pattern. This may give you some slightly different information about the fault already found, or it may be able to uncover another fault.

If you have sufficient technical knowledge you can check or replace the chip yourself. After doing this you should run the program again to check that the

memory is now working properly. Always remember to disconnect from the mains before removing the outer casing of your PCW and do not reconnect until your machine is fully reassembled.

However, do not attempt to repair your PCW yourself if you are unsure how to do it properly. You should either report the fault to your dealer or contact a specialist.

- *If you see a table of numbers followed by this message:*

```
Problems were found with the memory of this machine
This program was unable to pin down the location of the fault.

Do you wish to continue (Y)es (N)o, or (S)kip for tests on the
next pattern?
```

A message like this occurs when no pattern can be detected in the failures. It means that there is a fault somewhere in the hardware: probably, but not necessarily, in the memory. You can continue by typing Y which will show you more of the results or you can skip to the next test pattern to see if a different pattern will give more information about the fault.

If this fault message appears you should consult a computer specialist who can check your PCW for any hardware faults.

We are happy to deal with any problems that you might experience with our software. However, you cannot expect LocoScript (or any other program) to work correctly if the RAMtest program has discovered a fault in your hardware. If there is a fault, you should contact your hardware supplier or a computer specialist who will advise you about repairs.