

TESTING ECONET INTERFACES

When any work is done on a machine with Econet interface the Final Inspection Test used should include a test of the Econet interface. This would normally be done using a FIT test station in conjunction with the Econet FIT test kit. If these units are not available for any reason a number of quick tests are possible. These quick tests are no substitute for the use of the full FIT test which should be used wherever possible.

TEST CONSIDERATIONS

The main concern regarding the testing of Econet interfaces is that an interface may be tested on a short network in a workshop environment but may not be operating to full specification and will not subsequently work on a full length network. It is possible that some serious faults may exist in a network or interfaces and the network will still operate over short distances. The FIT test station is designed to disclose such serious faults and to test interfaces on a simulated full length line. It is therefore most important that if the test kit is not available, suitable steps are taken to disclose this type of fault.

TESTS FOR ECONET INTERFACES

You will find attached details of the circuit used in the Econet FIT test box to simulate a long length of cable. This simple circuit could be built up on a piece of board for use in the workshop, if test kit is not available. This circuit is used in the data line only, as the most important effect of a long line is to prevent the correct operation of the collision detect circuit in the interfaces. The correct operation of the interfaces can then be most suitably tested by using the computer as a station in conjunction with a file server (either level one or level 2). The operation of the VIEW and REMOTE facilities should be tested as well as the general communication to the file server. Remember to fit both terminators and to set the clock to a suitable rate. In order to check the operation of the collision detect circuit in the unit under test, it is necessary to create a situation in which two machines may attempt to communicate at once on the network. This can most easily be done by setting two stations to request continual catalogues from the file server. This can be done with a two line program on each station:-

```
10 *CAT
20 RUN
```

This will also form a reasonable soak test of the interfaces of the computers if left running for a few minutes.

If a file server is not available on the network, a simple test can be done by using the keyboard poke routine detailed on page 93 of the current Econet user guide (November 1982) this can be called as follows:-

```
10 DIM S% 50
20 ?S%=1
30 S%?1=STATION
40 S%?2=0
50 $(S%+3)="A SIMPLE MESSAGE"
60 X%=S% MOD 256:Y%=S% DIV 256
70 A%=&14
80 CALL &FEE1
```

This program should send the message into the keyboard of the station specified in line 30 and the message will then appear on that screen. This program could also be used continually between a number of stations to test collision detection.

If any faults occur, the network software in the station will make several attempts to establish communication before reporting an error message. The error messages can then be compared with the notes on the grey leaflets supplied with clocks and terminators which give a brief description of the possible reasons for such errors.

Other tests and a detailed description of the operation of the Econet interfaces are covered in the training courses.

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