

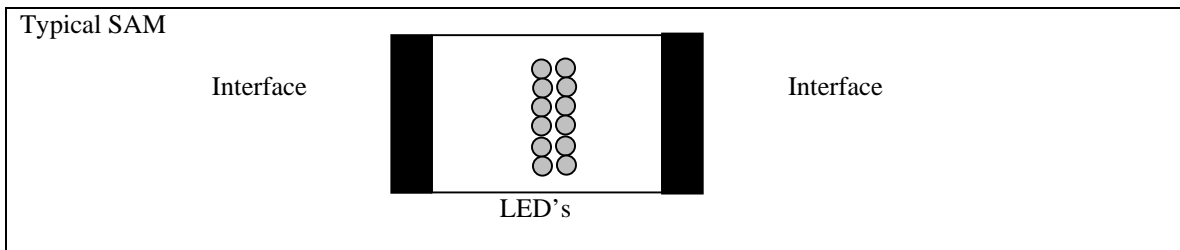


Testers

When testing telecommunications or data links there are four devices that are widely used. These are the Analyser, the BERT (Bit Error Rate Tester), the BOB (Break Out Box) and the SAM (Status Activity Monitor). In addition testers can be included within this group, although strictly speaking they don't generally test data or telecom links.

Status Activity Monitors (SAM)

SAM's are a very cost effective and simple device that will allow a data communications line to be monitored for activity. These comprise of a set of LEDs that lights up when ever a signal passes over the interface pin that they are connected to. The visual indications will allow a simple set of diagnostics tests to be carried out.



Break Out Boxes (BOB)

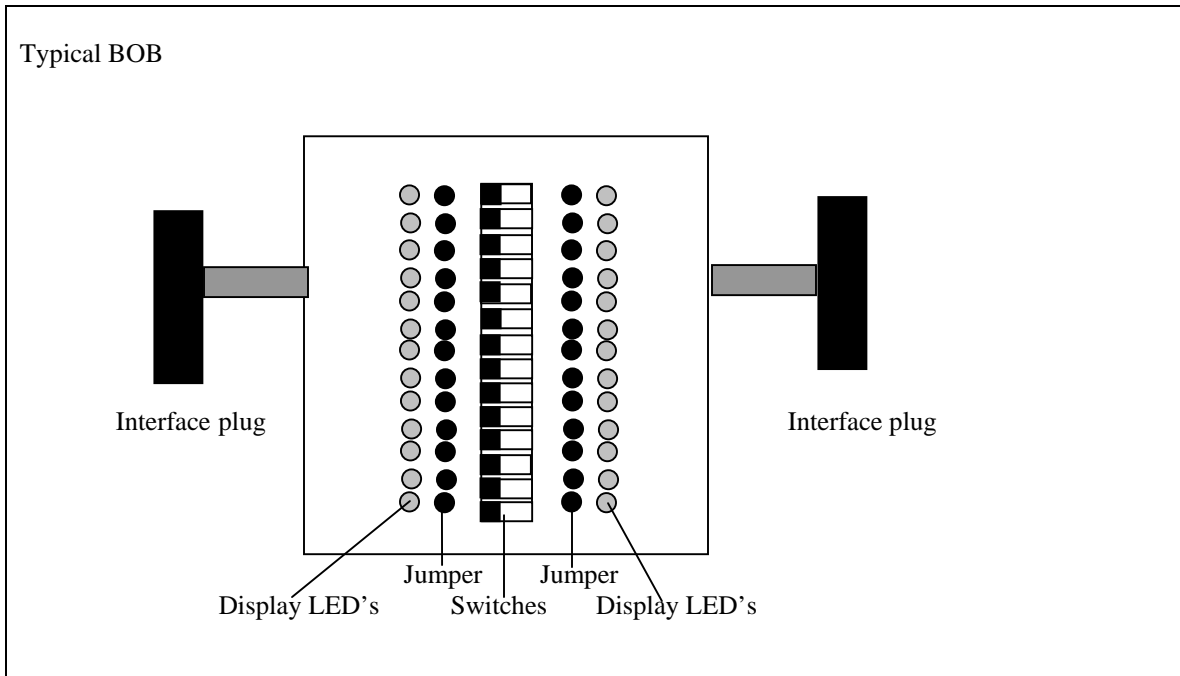
Although a BOB is a very simple device it is potentially one of the most useful diagnostic devices available. It is used to diagnose the most common cause of problems such as when datacoms equipment will not talk to each other, due to inappropriate control signals being presented. BOB's are available for the most common interfaces (X.21, V.35, V.24 or RS 449).

The BOB's are used to monitor the state of the individual lines on an interface. BOB's have the following component part: - a display, jumper points, jumper cables and isolating switches. The display on some units will indicate the state of the individual lines by LED's. The LED's may be of two different colours indicating a high or low signal on a lead. A BOB will have a set of jumper points to allow interface pins to be linked together. The isolating switches will break the signal on individual interface lines from passing through the BOB. Some models of BOB's have sets of sockets that will allow an oscilloscope to be attached and monitor each signal.

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When used to test a data link the BOB will show all of the control lines being used. It can then be used to show the effects on the data line when a control line is removed. The jumpers can be used to simulate possible loop-backs or crossovers that may be required to get a data link working. Once a particular configuration of jumper settings has been established, then this can be used specify the cable requirement used to interconnect the two ends of the data lines together.

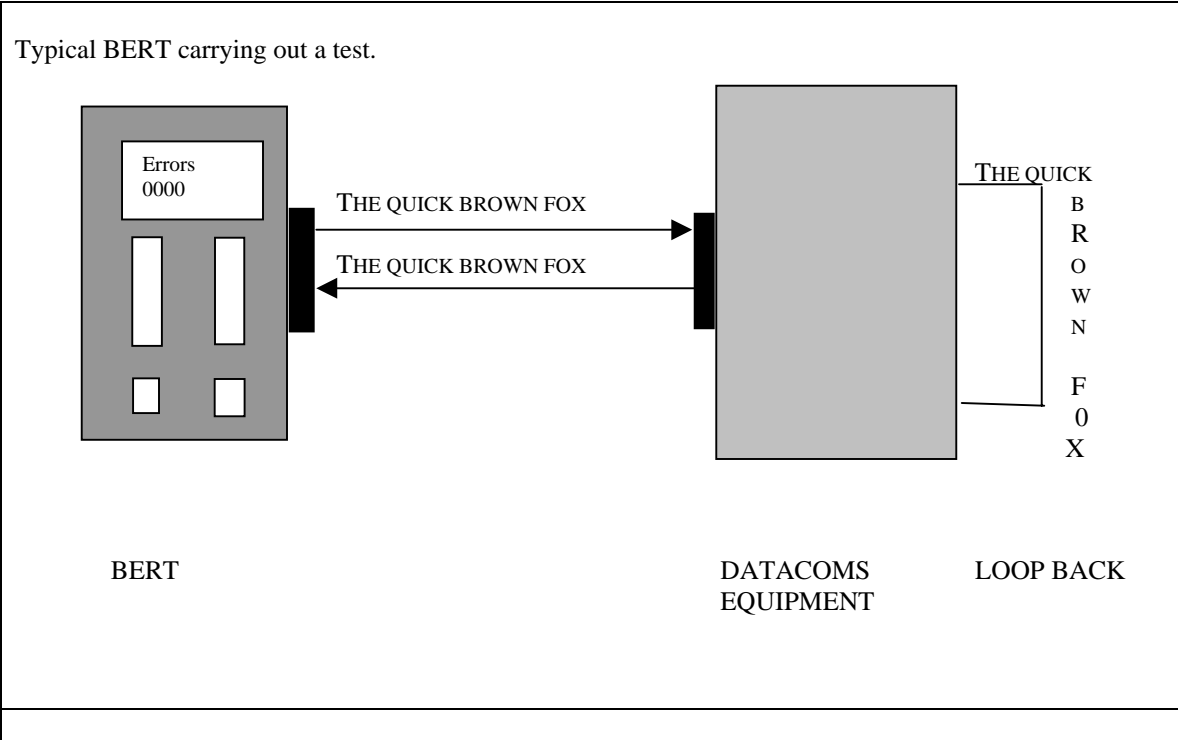


Bit Error Rate Testers (BERT)

BERT's are the next logical step up from the BOB. Like the BOB's, there are available BERT's for each of the common interfaces (V.24, X.21 or V.35). BERT's are capable of generating, sending, receiving and then checking various test patterns. They are used to determine where errors are being generated in a telecom's or datacom's link. BERT's can also inject an error into a test pattern, which can then be detected and checked by another BERT on the link. A good V.24 BERT can usually cope with both synchronous and asynchronous data and will cope with clocking speeds from 300 bps upwards.

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Analysers

Analysers are generally used on larger networks, where their increased sophistication is of use. Network Analysers range from simple devices that display the data being transferred between two pieces of equipment to more complex devices able to look at control signals or the construction of the data packets. Some models are even able to assess and measure the quality of and lengths of cabling. Analysers display their result on an in built display which ranging from simple LCD to CRTs.

Other Testers

Betterbox Communications sells a wide range of other testers. These testers are designed for either a single purpose or a limited number of purposes. These range from simple cable testers to telephone and ISDN simulators.

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Betterbox Communications sells the following range of Testers

SAM'S

PT0051 RS-232 9 Pin Male/Female

BOB'S

IFACER6	RS-232 Breakout Box
IFACER7	X.21 Breakout Box
CTEST100c	RS-232 Breakout Box
CTESTX21M	X.21 Breakout Box
CTESTX21H	X.21 Breakout Box
CTEST100DLX	RS-232 Breakout Box with Voltage pull up/down
COMTEST100C	V.24 Breakout Box
CTESTV35M	V.35 Breakout Box
DCNW2505	RS-232 Cable Tester
DCNW100	RS-232 Breakout Box
DCNW1000	RS-232 Breakout Box
DCNW422M	X.21 Breakout Box
DCNW650	Combined RS-232 Breakout Box and Volt/Ohm meter
DCNW355M	V.35 Breakout Box with RS-232 monitor port
DCNW300	Centronics Breakout Box
SERI700	RS-232 Breakout Box

BERT'S

DCNWET1	RS-232 & ET-1 Synchronous/Asynchronous BERT
ET200	V.35 & X.21 BERT
DCNW422M	X.21 BERT
PENBERT	Mini PCM monitors with BERT.

ANALYSERS

HCT6000	128k Analyser with 2Mg BERT, a wide range of interface kits are available for this device.
SDM001	Serial Data Meter for RS-232
LT2000	Datacoms line tester & accessories
WS155	Ethernet and ATM analyser, there is available a Fibre kit.
FS12016E	Ethernet and Token ring network Analyser.
FS12018E	Token Ring networks Analyser.
MSC001	Ethernet cable Analyser.
CTESTDLM125	RS-232 trouble-shooter, with in built BERT
OMNISCAN	Cable certification analyser.

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Other Types Of Testers Include:

HHTESTE1	E1 Line monitor & tester
HHTESTX21	X.21 tester kit
HHTESTV35	V.35 tester
CLT2	Cable length tester.
LT0245	Modular cable tester.
CT210	RJ45, RJ11 Modular cable, ThinLan cable and USB tester.
MW4506	RJ45, RJ11 Modular cable tester.
TSTIL001	ISDN & LAN tester
PCCHECK01	Cable checker
ET2100	Fibre optic tester
FBCHECK01	Fibre checker.
TESUTS3	All Weather hands free Butt-in Telephone.
MD9940	Telephone line simulator
IS648	ISDN BRI tester
ISDNSIM2	ISDN simulator
NS0900	ISDN simulator