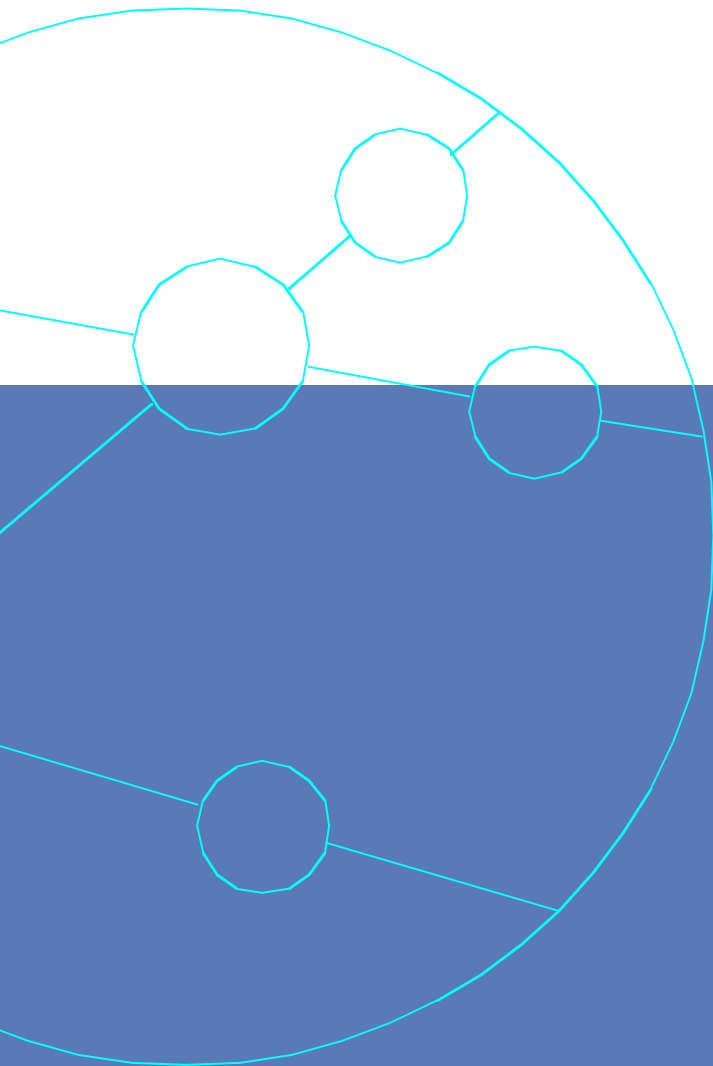


# Troubleshooting ISDN problems on private switches with Duet

*A common problem encountered by installers of PBX or terminal equipment relates to the Layer 2 protocol settings. Quite often the network operator will not adhere to instructions to supply point-to-multi-point operation and will provide a point-to-point line instead.*

Application Note ANDUET\_7



Testing the World's Digital Networks

TrendCommunications

## TROUBLESHOOTING ISDN PROBLEMS ON PRIVATE SWITCHES.

### Solving call set-up problems on the PBX - S/T & U emulation on the auroraDuet

A common problem encountered by installers of PBX or terminal equipment relates to the Layer 2 protocol settings. Quite often the network operator will not adhere to instructions to supply point-to-multi-point operation and will provide a point-to-point line instead. Rectifying this requires a simple parameter change at the local exchange but identifying the problem can be difficult. By isolating the subscriber equipment first to ensure correct functionality by testing with auroraDuet in LT mode and then performing some simple tests with the tester in TE mode (point to multi-point ) on the S-BUS, a quick resolution may be found.

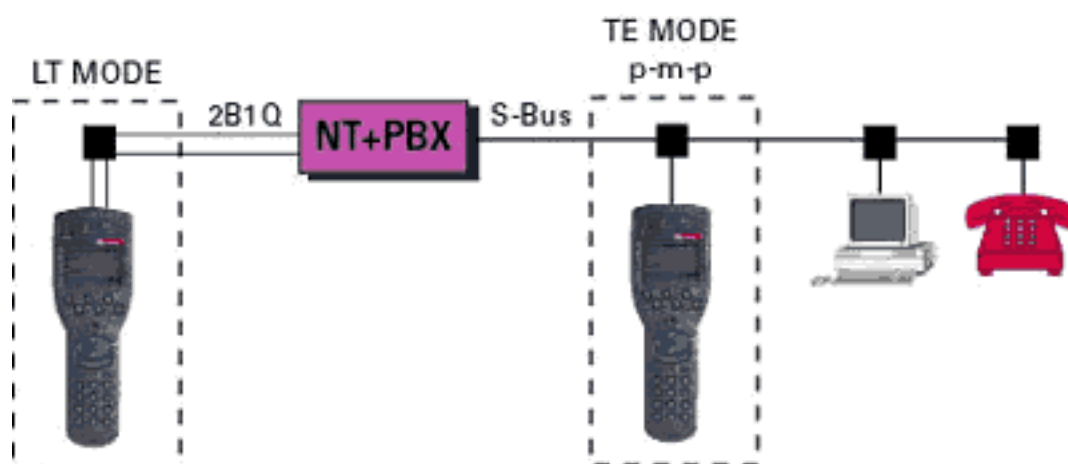
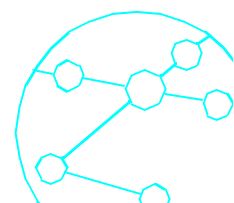


Figure 1

PBX test configuration.

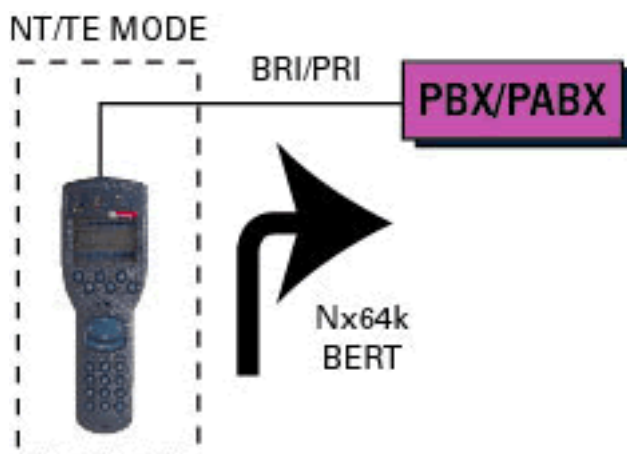
To determine whether the U interface has been set to p-m-p or p-p, a series of calls may then be passed in either direction (to and from the tester set to p-m-p mode). If calls can only be passed in one direction and all physical layer conditions are correct then it is very likely that the line is set to point to point



## System integrity check - Nx64k ISDN 'data call' BERT on auroraDuet

Checking the capacity and integrity of a BRI or PRI and connected PBX is a very hit and miss affair. It is possible set up 2 or 30 simultaneous calls for BRI or PRI into a PBX with most ISDN test equipment but with no associated data content, the loading is less than fully effective.

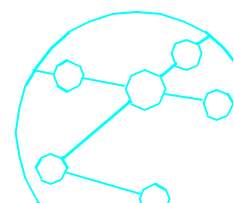
The auroraDuet will allow the user to set-up between 2 and 30 simultaneous 64k data calls via the BRI or PRI into the PBX or switch and then pass a 64k bit/s BERT pattern through each connected B-channel.



This test has the effect of both fully loading the available user bandwidth on the link and providing qualitative measurements of the circuit under test.

The test may be performed to any available end-point in the network, either locally or to a specified distant location, CPN or another Trend tester in 'unattended mode'.

The functionality detailed above is available in the latest release of auroraDuet software. Please contact your Local Vendor or the Trend Communications Ltd Customer Support Hotline (tel: +44 1628 851085) for further information.





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