Are your Cat 5e & 6 patch cords compliant with the current Standards?

Are the patch cords that you bought NOT as described?

Introduction
The purpose of this sheet is to highlight the difficulty in procuring "compliant" patch cords for structured cabling systems. Recent research has found that a very significant number of the patch cords sold today are non-compliant to published Standards.

All of the recognised cabling standards – BS EN 50173-1, ISO/IEC 11801:2002 and TIA/EIA-568-B - fully specify the performance requirements of patch cords and the test equipment to analyse them. This enables anyone to assess patch cords for compliance.

Why are there so many non-compliant patch cords?
Simply put, as with many things in life, it is cheaper to manufacture a patch cord that is non-compliant. Cheap patch cords are common, and users and installers are often not aware that the patch cords they have bought are non-compliant.

The Trade Descriptions Act 1968 makes it an offence to supply, or offer to supply, goods to which a false or misleading trade description is applied. If a patch cord states that it is Category 5e or Category 6, then it must adhere to the requirements of the relevant stated standards. Patch cords that fail to meet these requirements are **not fit for purpose** and, consequentially, anyone supplying the patch cords is breaking the law and can be prosecuted under the Trade Descriptions Act.

Why do patch cords need to be compliant?
Importantly, with non-compliant patch cords, you will forfeit all of the performance that has been planned in the cabling system, since the non-compliant patch cord, as the weakest link, will determine the overall performance of the cabling system. Therefore, the investment decision made for the cabling system maybe wasted.

What problems will you encounter by using non-compliant patch cords?
Today's 10/100 Ethernet applications may look as if they are working satisfactorily, but the reality is that they will be suffering from lost data and re-transmissions, resulting in slow networks, poor efficiency and reduced user effectiveness. For newer applications, such as Gigabit Ethernet, that use multiple bi-directional pair transmission on all pairs, the performance may be so low that the application stops altogether. Some of these problems will be hard to see without a more detailed analysis of the operation of the network, but new IP telephony (VoIP) users may hear clipping on the voice signal and video transmissions may also lose synchronisation. Whilst there will still be some availability on the network, many users will assume the cabling system is OK and place the blame in other areas, e.g. the active equipment.

The cost of patch cords is low but the resulting cost of using non-compliant patch cords can be very high. For example, compare the very small percentage that the cost of a patch cord represents to that of the overall cabling and network equipment, and the subsequent cost of any troubleshooting when the faults are reported. What is the point of specifying a network with Standards-compliant fixed cabling and active equipment, and then degrading it with poor quality, non-compliant patch cords? Whilst the network may well appear to work today, what happens when you want to operate higher performance, or more time sensitive, applications that require the full design capability of your cabling system? Will it work then? How much will it cost you to correct this - both in terms of time and money?

What is the solution? How can you tell if you have a good patch cord?
All patch cords appear similar and all claim to meet Category 5e or 6. Firstly, you can follow the advice of your cabling system supplier and use approved patch cords that they recommend. You can also request that these are supplied with test results and independent verification of compliance, or you can request to witness the compliance testing. The recent arrival of patch cord field-testing equipment means that the user or installer can now easily confirm the "compliance" of patch cords - at the time of supply, at the end of the installation, or whilst they are in service. **There are now no excuses for supplying, accepting or using non-compliant patch cords!**

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