

Locating NEXT Problems

This article describes how to locate the source of a failure of Near End Crosstalk (NEXT) when doing copper cable certification. We will start with the assumption you have run a cable certification test and now want to see whether your NEXT results are due to a specific point in the link (often a connection) or whether the NEXT issue is distributed throughout the link (means the cable is the problem).

Finding NEXT Problems

1. Start with Autotest Summary NEXT failed, but why?

01/09/19 09:55 Main 82%			
			FAIL 🍪
TIA - Cat 6 Channel			
Summary	🥪 Wiremap 🛛 Details		
		Result	
Length(m)		14.4	
Delay(ns)		75.0	
Resistance(Ω)		2.7	
NEXT(dB)		-3.0	
RL(dB)		4.9	
PSNEXT(dB)		-1.8	
IL(dB)		2.9	

2. From this screen, press the down arrow 3x to get to the NEXT Locator



Press the Details softkey



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3. Press NEXT Locator



4. Test Result Screen



There are a several observations you can make about this link. First, the failure is due to a spike in NEXT about 8m away from the main unit, at a connection. There is also a lesser NEXT issue about 5m away. In addition, if you look closely at the picture you'll note the NEXT in the cable from 0 to 5m is much better than the NEXT performance of the cable between 8 and 13m.

Expert users can use the left/right scroll keys and + - zoom keys to get more detail.

Note that the TestPro also provides a full graph of the NEXT performance. You can see in the example below that the NEXT crosses the pass/fail line at several frequencies. This data is helpful for expert users but will not help the average user find the location of the NEXT failure so it can be repaired.



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