

# Trouble Shooting Performance Test Results

## When – Wiremap issues gives a FAIL result

### Faults & Possible Causes

#### Wire Map: open

- Wires connected to wrong pins at connector or punch down blocks
- Faulty connections
- Damaged connector
- Damaged cable
- Wrong outlet configuration selected in setup
- Wrong application for cable

#### Wire Map: split pair or reversed pair

Wires connected to wrong pins at connector or punch down block.

#### Wire Map: crossed wires

- Wires connected to the wrong pins at connector or punch down block
- Mix of 568A and 568B wiring standards (1-2 and 3-6 crossed)
- Crossover cables used where not needed (1-2 and 3-6 crossed)

#### Wire Map: short

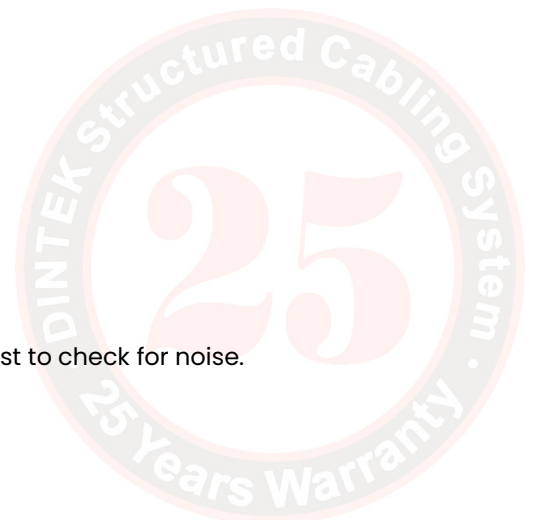
- Damaged connector
- Damaged cable
- Conductive material stuck between pins at connector
- Improper connector termination
- Wrong application for cable

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## When – NEXT, PSNEXT, ACR-F, PSACR-F gives FAIL, FAIL\*, or PASS\* result

### Possible Causes

- Excessive untwisting of pairs at connector
- Poor quality patch cords
- Poor quality connectors
- Poor quality cable
- Poorly matched plug and jack (Cat 6/Class E applications)
- Incorrect link interface adapter
- Cable compression (tight cable ties, pinches, kinks, etc.)
- Inappropriate use of couplers
- Excessive noise source near cabling under test. Use the impulse noise test to check for noise.
- Wrong test standard selected



## When - Return loss gives FAIL, FAIAIL \*, or PASS\* result

### Possible Causes

- Cable impedance ... not 100Ω
  - Patch cord handling causing changes in impedance
  - Excessive amount of cable jammed into outlet box
  - Tight service loops in telecommunications closet
  - Excessive untwisting of pairs at connector
  - Damage to connectors
  - Cable impedance not uniform (possible damage)
  - Mismatches in cable construction (such as using cable from another manufacturers)
  - Water in cable jacket
  - Cable compression (tight cable ties, pinches, kinks, etc.)
  - Wrong test standard selected
  - Defective link interface adapter
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## When Attenuation (insertion loss) gives FAIL, FAIL\*, or PASS\* result

### Possible Causes

- Cabling is too long
  - Poor quality patch cord
  - Bad connection
  - Wrong cable type in installation
  - Wrong test standard selected
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## When - Characteristic impedance exceeds the limit or an anomaly is detected

### Possible Causes

- Bad connection
  - Cable compression (tight cable ties, pinches, kinks, etc.)
  - Mismatch of cable types
  - Water in cable jacket
  - Excessive loading at coaxial cable tap
  - Incorrect terminator value (coaxial cable)
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## When - Resistance gives FAIL, FAIL\*, or PASS\* result detected

### Possible Causes

- Cabling is too long
  - Bad connection due to oxidized or loose contacts
  - Wire gauge is too thin
  - Wrong patch cord type used
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## When - Length gives FAIL result

### Possible Causes

- Cable is too long (may need to remove coiled service loops)
- NVP is set incorrectly

