

Wiremap

- Pair 1 (Blue)
- Pair 2 (Orange)
- Pair 3 (Green)
- Pair 4 (Brown)



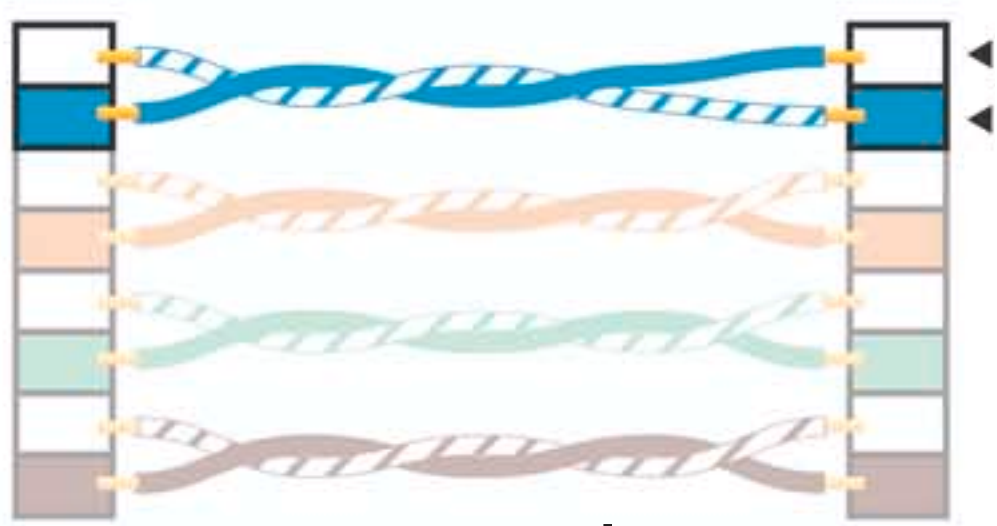
Correct



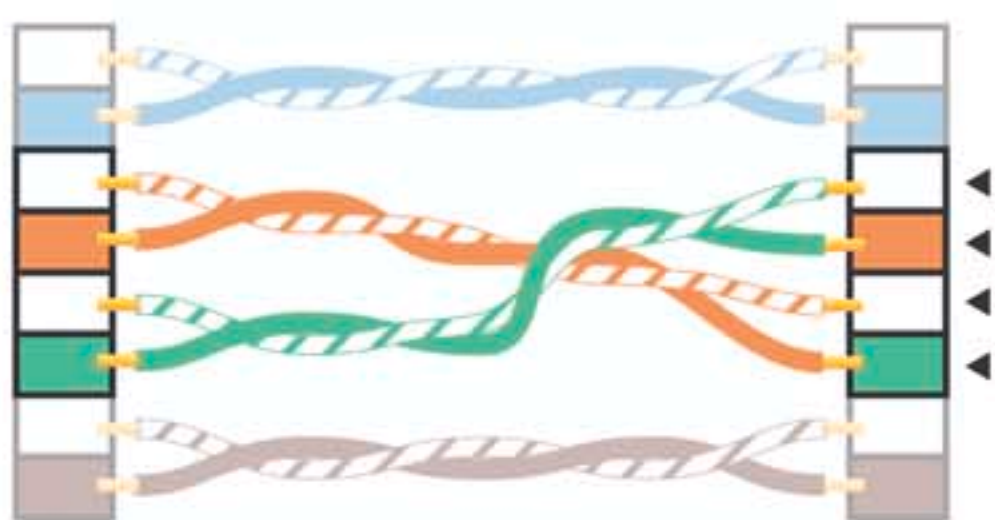
Open



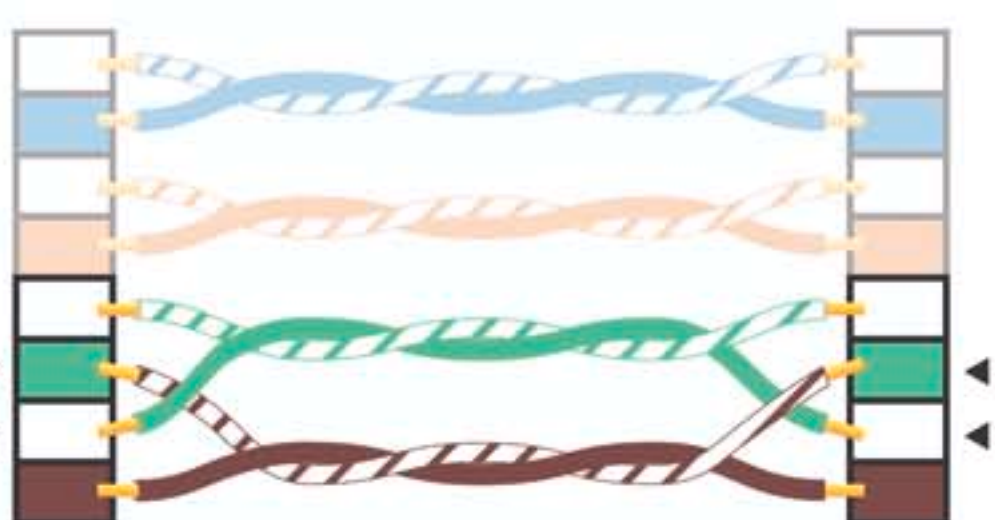
Short



Reversed



Crossed

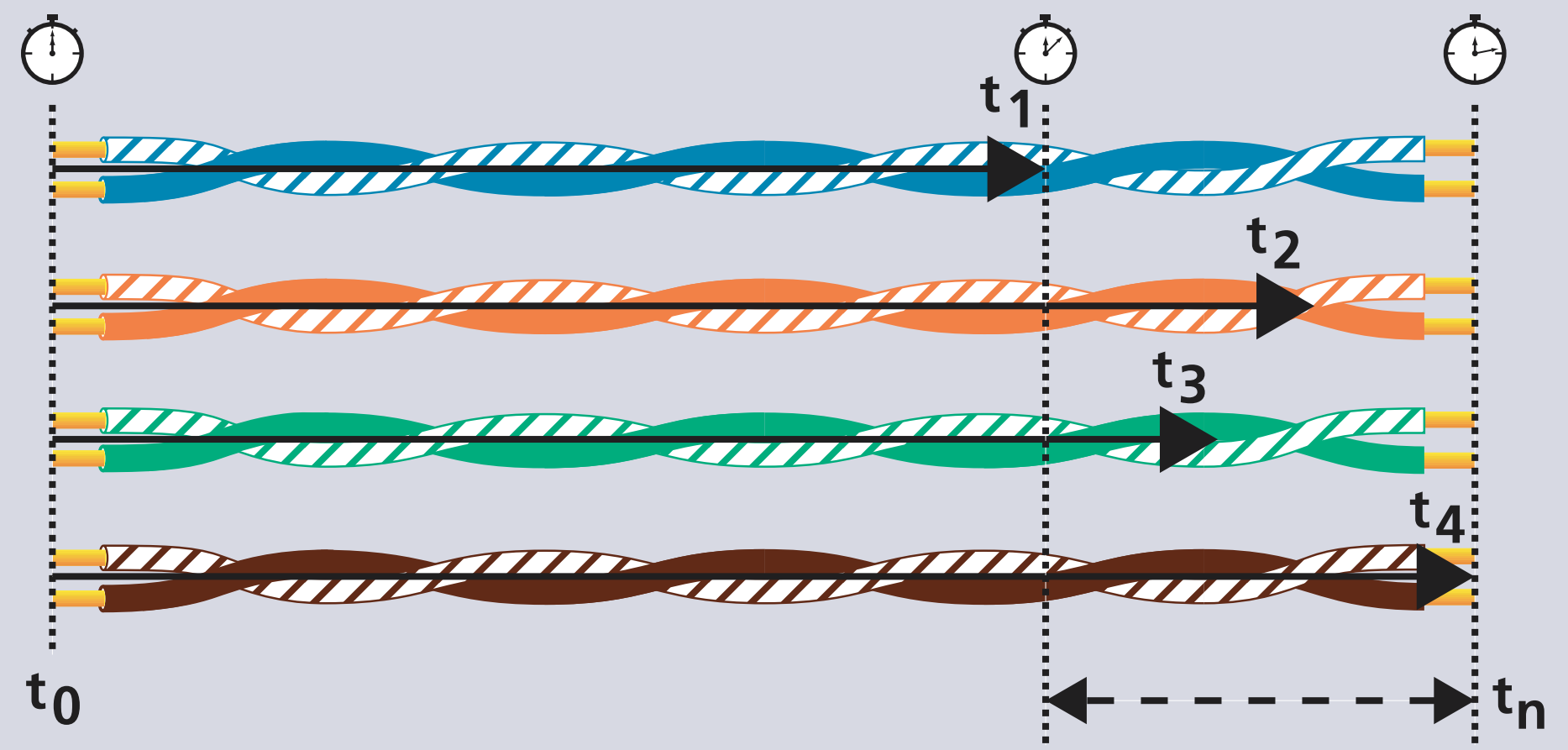


Split

Delay/Skew

Delay = $t_n - t_0$
 Skew = $t_4 - t_1$

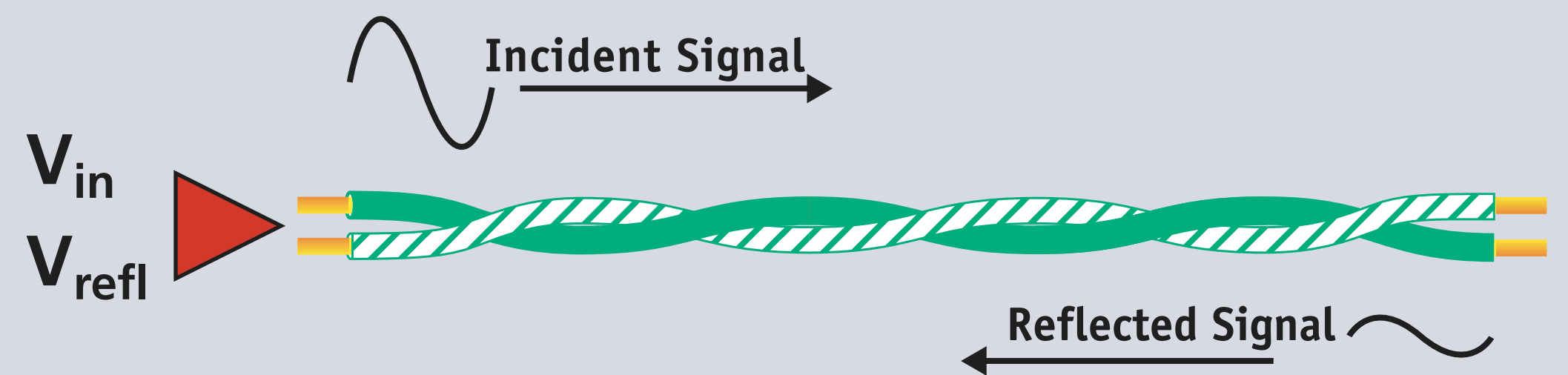
Skew = Maximum difference in propagation delay between the fastest pair to the slowest pair.



Delay/Skew Failure: Excess length, poor cable design.

Return Loss

Return Loss: $\left[\frac{V_{in}}{V_{refl}} \right]$

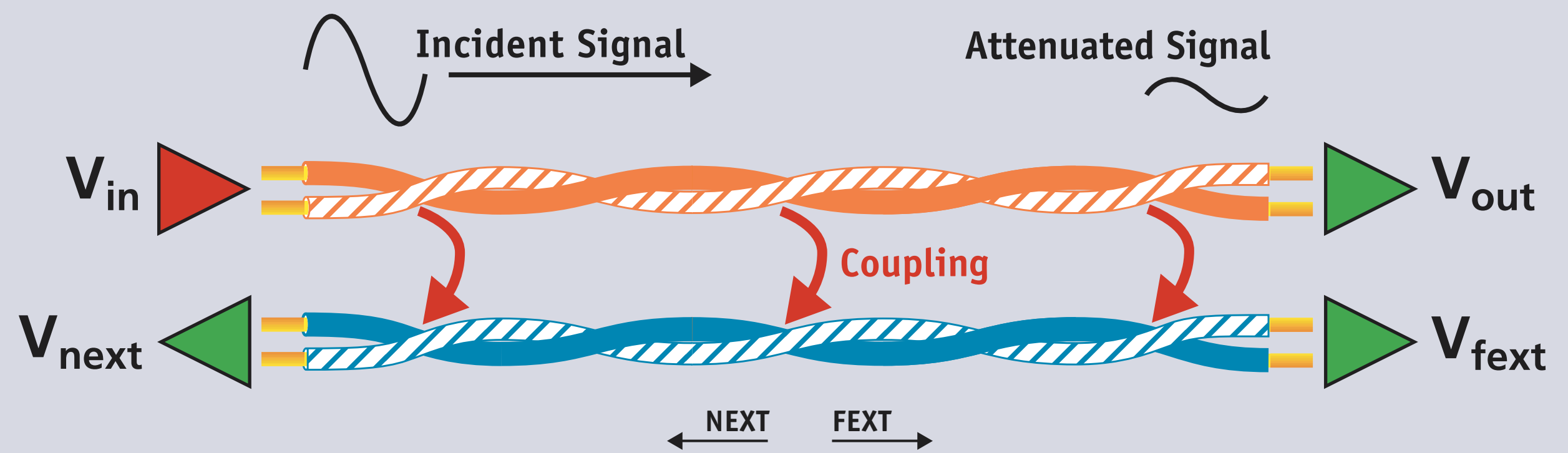


Return Loss Failure: Mismatched impedance of cable-connector, jack-plug, or cable-cable; untwisting at connector, 2 close connections, asymmetric twisting, high resistance contact, poor cable or connector design.

Insertion Loss, NEXT, FEXT, ACR, ELFEXT

Insertion Loss: $\left[\frac{V_{in}}{V_{out}} \right]$

Insertion Loss Failure: Excess length, high frequency or temperature, excess return loss, wire gauge too thin, poor cable design.



NEXT: $\left[\frac{V_{in}}{V_{next}} \right]$

Failure: Poor twisting, common mode conversion, CP close to T0, poor cable or connector design, reflected FEXT.

ACR: $\left[\frac{V_{out}}{V_{next}} \right]$

Failure: Excessive NEXT or insertion loss.

FEXT: $\left[\frac{V_{in}}{V_{fext}} \right]$

Failure: Poor twisting, common mode conversion, poor cable or connector design.

ELFEXT: $\left[\frac{V_{out}}{V_{fext}} \right]$

Failure: Excessive insertion loss or FEXT.

For a complete view on cable testing technology and standards information, visit www.cabletesting.com, a Fluke Networks sponsored site.

For more information please call:
 U.S. & Canada 1-800-508-0490
 Europe 00-800-63263200
 Other Countries 1-425-446-4519

