Wiring Standard for all except USA.

	568-A Wiring **Pair #** 1 - White/Blue 2 - White/Green 3 – White/Orange 4 - White/Brown	**Wire Pin #** White/Blue = 5 Blue/White = 4 White/Green =1 Green/White = 2 White/Orange = 3 Orange/White = 6 White/Brown = 7 Brown/White = 8

Crosstalk:

Crosstalk is the "bleeding" of signals carried by one pair, onto another pair through the electrical process of induction (wires need not make contact, signals transferred magnetically). This is an unwanted effect, that can cause slow transfer, or completely inhibit the transfer of data signals over the cable segment. The purpose of the wire twists, in category 5E cable is to significantly reduce the crosstalk, and it's effects. Two types are: NEXT (Near End Crosstalk), and FEXT (Far End Crosstalk). Fiber Optic cable is the only medium that is 100% immune to the effects of crosstalk.

Ambient Noise or Electromagnetic Interference (EMI):

Similar to crosstalk, in that it is an unwanted signal that is induced into the cable. The difference is that ambient noise (or EMI) is typically induced from a source that is external to the cable. This could be an electrical cable or device, or even an adjacent category 5E cable.

Attenuation:

Attenuation is the loss of signal in a cable segment due to the resistance of the wire plus other electrical factors that cause additional resistance (Impedance and Capacitance for example). A longer cable length, poor connections, bad insulation, a high level of crosstalk, or ambient noise, will all increase the total level of attenuation. The 568A standard, specifies the maximum amount of attenuation that is acceptable in a category-5E cable segment.

Home made wire running tools:

Metal Coat Hanger:
To fish cables easily thought or down inside walls. Also can be used to hook a cable that is not reachable.

Ball & String:
A ball attached to a string. Good for large open ceiling areas.
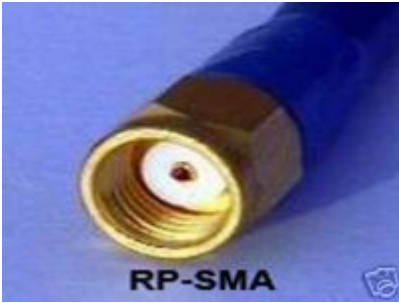
PVC pipe:
½'" plastic piping from hardware store use a a long fish for open ceilings.

String & Chain:
Makes running wire inside walls easy. Small dogs chains work well for this.

Wifi Connector Types:

RP-SMA

MMCX

N-type

RP-MMCX

RP-TNC

Network Cable Tester: (for certifying network cable runs)

Tester

Smart remote