Practice - Crimping practice of Co-axial(RG6) cables

Aim : Crimping a **Co-axial(RG6) cables** & Testing using Cable Tester

Apparatus required:

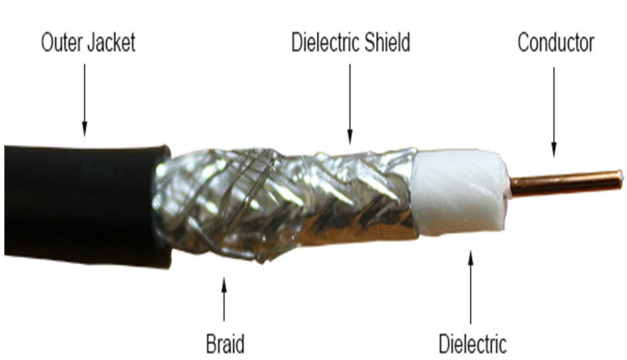
1. Co-axial (RG6) Cable - min 10 meter.
2. Cable Crimper– 01 Number
3. Co-axial Compression tool -01 Number
4. Stripper -01 Number
5. F connectors – min. 02

Theory:

Coaxial cable, commonly referred to as coax, is an electronic signal wire used for signals that are sensitive to interference by outside noise sources. For example, lightning, clear air static, motors and high frequency electronic signals could impose themselves on the wire and corrupt the signal. Coax guards against this by wrapping a single conductor with a tube of metal foil and mesh. This tube runs coaxially over the signal conductor. Maintaining the integrity of this shielding tube requires a special crimp termination method for coax.

Coaxial cable is a type of copper cable specially built with a metal shield and other components engineered to block signal interference. It is primarily used by cable TV companies to connect their satellite antenna facilities to customer homes and businesses. It is also sometimes used by telephone companies to connect central offices to telephone poles near customers. Some homes and offices use coaxial cable, too, but its widespread use as an Ethernet connectivity medium in enterprises and data centers has been supplanted by the deployment of twisted pair cabling.

Coaxial cables are also used in automobiles, aircraft, military and medical equipment, as well as to connect satellite dishes, radio and television antennae to their respective receivers.

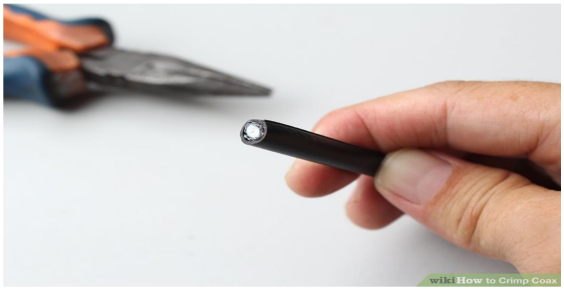


Use these tips to learn how to crimp coax.

Procedure:

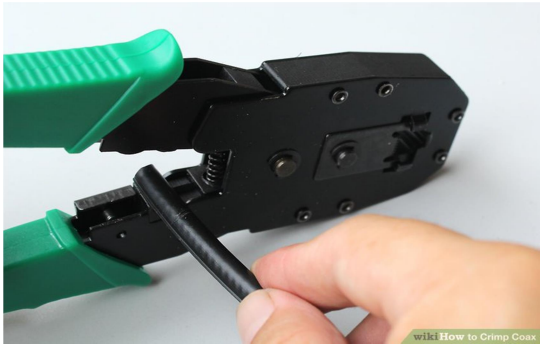
STEP 1: **Create a termination point.**

- Cut off the end of the coax. Use small, sharp wire cutters. Create a squared off surface, rather than a beveled surface.
- Mold the end of the coax using your fingers. The cylindrical cable will be distorted by the pressure of making the square cut. Mold the end of the cable back into a cylinder.



STEP2: Insert the coax into a coax stripper tool.

These tools are available at hardware and electrical stores. Make sure that the end of the coax is flush against the wall or guide on the stripping tool. This will ensure proper strip length.

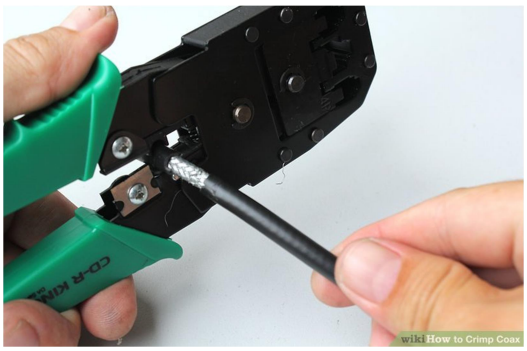


STEP3: Clamp the stripper tool closed around the coax.

Smoothly spin the tool around the coax 4 or 5 times, or until you no longer hear the sound of metal being scored. Keep the rotation in 1 place on the cable. Do not apply any force that would pull on the cable insulation coating.

STEP4: Remove the coax stripper tool.

This strips the insulation to expose the wire. The tool will have made 2 cuts. Use your fingers to gently pull off the material nearest the end of the cable. This will expose the bare center conductor. Use your fingers to gently pull off the outer insulation that has been cut free. This will expose a layer of foil.



STEP5: Tear off the exposed foil.

This will expose a layer of metal mesh.

STEP6: Bend back the exposed metal mesh with your fingers.

Do not tear the layer of foil that is under the metal mesh. The foil must be left in place around the inner insulation. Bend the mesh all the way back so that it is molded over the end of the outer insulation.

STEP7: Press the end of the coax into the back of an F connector.

F connectors are available at hardware and electrical stores. Make sure that the white inner insulation can be seen pressing against the front flange of the connector. If you can't see the insulation, jiggle and continue to push the coax and the connector together. Use straight pressure only. Do not twist the coax in the body of the connector.

STEP8: Crimp the connection with a crimper.

Place the F connector into a coax crimping tool. Coax crimping tools are available at hardware and electrical stores. Fully squeeze the tool handle and release. Remove the finished crimp connection from the tool.

Gently pull on the wire to make sure it holds within the connector.

Video link: https://www.youtube.com/watch?v=78GWKwRUngE

Result: Crimped Co-axial(RG6) cables & Tested using Cable Tester.