

VM3COP63.05 Production Procedure - 8000004 Cable Assembly

Parts List:

Cable Coax RG174 U PVC black 50m
GoldPt SMB r/a plug - RG174 cable 50 ohm
Heatshrink Tubing - Black 4.8mm x 9m
Polyurethane Resin 500G

Stock Reference:

8030502
8030503
8030504
8050010

Tool List:

Cable stripping tool for coaxial cables
Crimping tool for SMB connector
Syringe 20ml
Soldering iron
Lead free solder
Heat gun
Pick
Wire cutters - small
Knife
Cable tester (CE196)

8060015
8060010
0050042

Production Method:

Please read VM3COP63.04 before proceeding

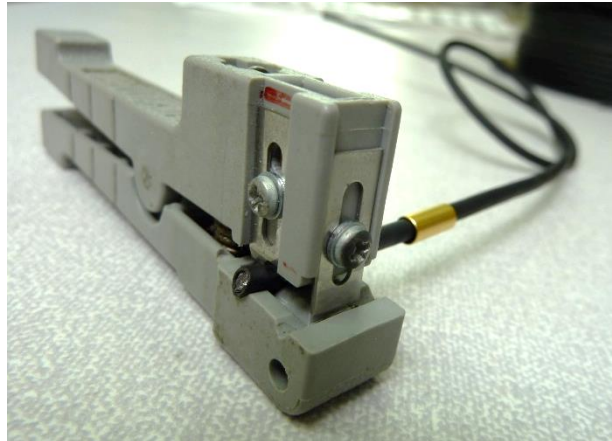
- 1) Measure and cut a 44cm length of coaxial cable. Typically, cut 50 cables to use a box of 100 SMB connectors.



- 2) Tie a loose knot in the cable and thread the connector crimp over the cable. The knot will prevent the connector crimp from sliding off.



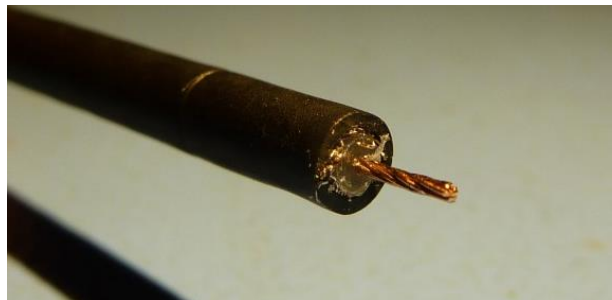
- 3) Place the cable in the coaxial stripping tool, as shown.
- 4) Rotate the stripping tool around the cable till the outer sheath has been cut.



- 5) Remove the outer cable sheath and braided shield.



- 6) Remove the clear plastic cable inner, as shown. Ensure that there are no excess strands of the outer shield near the wire core.

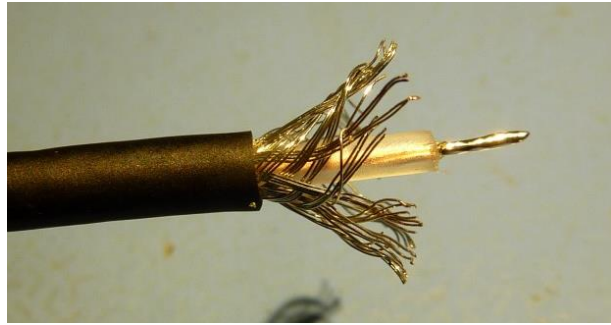


- 7) Remove the cut portion of the outer cable sheath.

- 8) Tin the wire core.



- 9) Spread the braided shield away from the clear plastic core separator.



- 10) Feed the solder through the cable entry and into the slot of centre pin.



- 11) Apply the solder to the centre pin.



- 12) Feed the central wire core through the cable entry, ensuring that the braided shield remains on the outside.

- 13) Solder the central wire core into the soldered slot of the central pin.

- 14) Inspect the solder joint, making sure that the central pin is isolated from the surrounding connector body.



- 15) Push the connector crimp over the braided shield.



- 16) Using the pick, tuck any excess shield into the crimp. Push the crimp up to the connector body. The crimp must be flush to the connector body, with no strands of shield showing.



- 17) Place the crimp into the large hole of the crimp tool, ensuring the crimp is still flush to the connector body.



- 18) Use the crimp tool to affix the crimp.



- 19) Repeat the process, affixing a connector at the other of the cable.



- 20) Attach the double ended cable to the cable tester.

- 21) In turn, press the red 2 way switch.

- Press up – The top LED should light. If the LED fails to light then the cable is open circuit.
- Press down the bottom LED should light. If the LED fails to light then the cable is open circuit.
- If, on either function, both LEDs light at the same time, then the cable has shorted and failed.



- 22) Take the tested cables and undo the loose knot.

- 23) Place the cables in a resin curing rack.



- 24) Mix the resin – refer the manufactures data sheet for the method. In short, remove the dividing clip and mix the two liquids thoroughly. This takes 2 to 4 mins.

The resin is now beginning to cure, so work as swiftly as reasonably possible for efficient use of the resin.

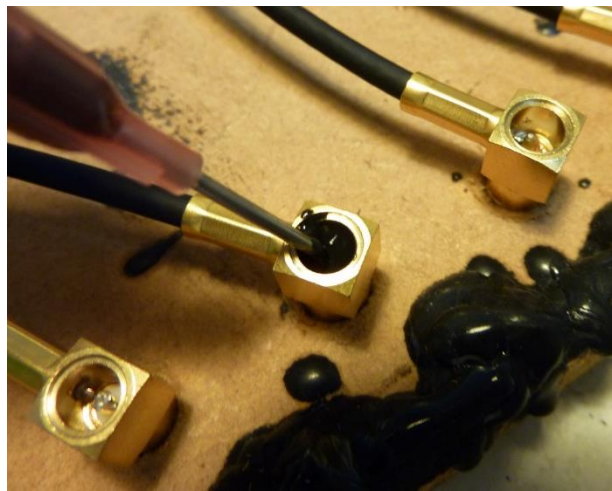


25) Before opening the resin bag, wear rubber gloves and an apron. The resin is very hard to wash off.

26) Affix a needle to the syringe, if needed. Fill the syringe with the resin.



27) Fill the connectors with the resin. Try to avoid leaving air gaps.



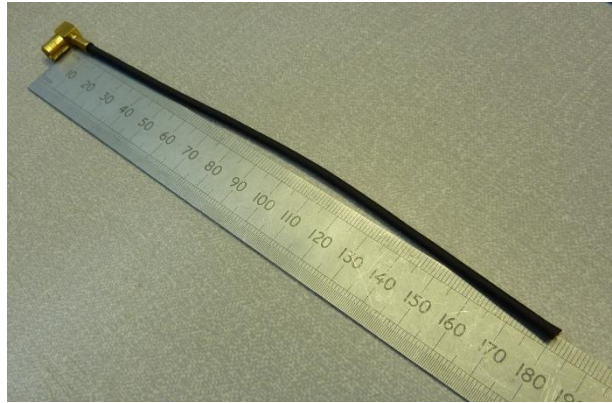
28) The connector, when full, should be slightly domed with resin.

29) Allow the resin to harden overnight.

30) Once cured, remove the cables from the curing rack and retest as per step 21.



- 31) Cut the cables to 180mm, as measured from the connector body.



- 32) Place 20mm of 4.8mm heat shrink over cable clamp.



- 33) Using a heat gun, shrink the heat shrink into place. Ensure that the heat shrink is flush to the connector body.



- 34) Inspect the cables for over spill of resin and general appearance.
- 35) Count the cables to ensure the batch is complete. Using a rubber band, bunch the cables into 100s.
- 36) Use the intra-stats system to record the QA.

