RJ-45 CAT6 Inline Receptacle with Backshell

Installation Guide

These instructions have been created for use with the following L-com part numbers:

- ECRP5103UA0
- ECRP5103UB0
- ECRP5201UA0
- ECRP5201UB0
- ECSP5103UA0
- ECSP5103UB0
- ECSP5201UA0
- ECSP5201UB0
- ECSP5209UA0
- ECSP5209UB0

1. Purpose

The purpose of this procedure is to document the termination and assembly work instruction processes and outline the guidelines for in-process inspections of the R-JACK® CAT6 Plug.

2. Scope

The scope of this document is intended for the manufacturing floor to provide details to terminate and assemble the RJ-45 CAT6, in an R-JACK® Inline Receptacle.

3. Records

Only the latest revision of this work instruction will be used in production. Please refer to the released work instruction folders under Quality Management System.

4. Associated Documents

5. Definitions

6. Responsibility

Manufacturing and Engineering Management

7. Tools, Fixtures, Consumables

- Marker
- Ruler
- Wire Cutter
- Scissor
- RJ-45 Crimp Tool
- 0.255 Hex Crimp
- 3/4" Hex Wrench
- 3/8" Hex Wrench
- Use ant RJ-45 receptacle to mount plug during final assembly

8. Safety Requirements

- Safety glasses – eye protection is required per OCC Policy 099-0040-000.
- When using razor blades handle with extreme care. A fiber jacket can dull a razor after only a few cuts, which makes it even more dangerous.
- **CAUTION:** Ensure all reels and connectors are free of sharp or jagged edges before starting the termination process.
- **CAUTION:** Large / Heavy reels require a 2-person lift to prevent injury. Use your legs not the back when lifting.
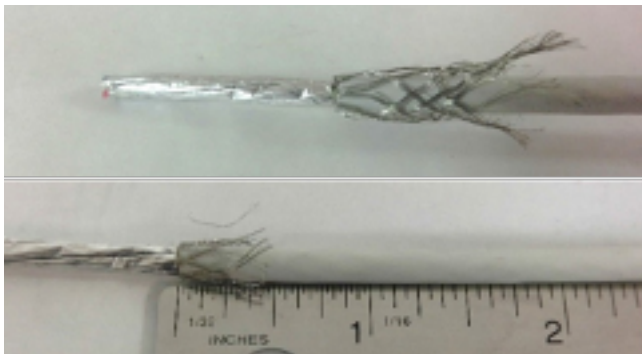
9. Cable Preperation
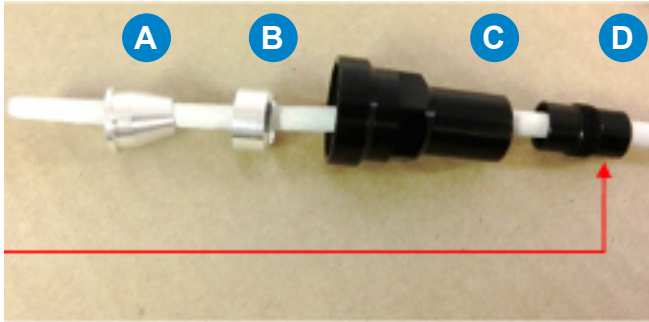
9.1
Place the connector members of the OCC Inline Receptacle connector onto the cable oriented from left to right as follows:|

A. Inner Wedge

B. Outer Wedge

C. Sub Assembly Reap Cap

D. Compression Nut

Ensure the hex nut feature on the back of the rear cap is positioned toward the other end of the cable and the threaded end is pointed to the connector.
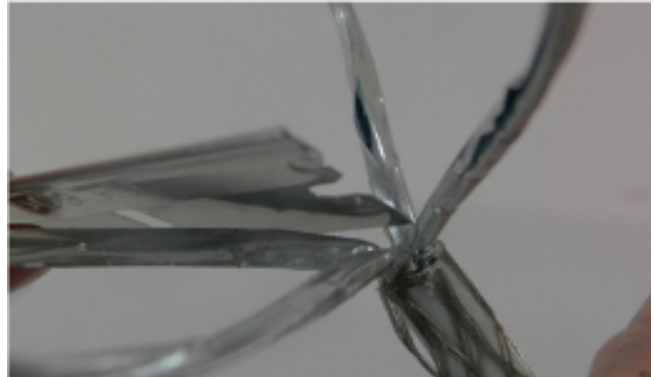

9.3
Once the outer jacket is removed, fold the braid back over the jacket and cut it to ½".

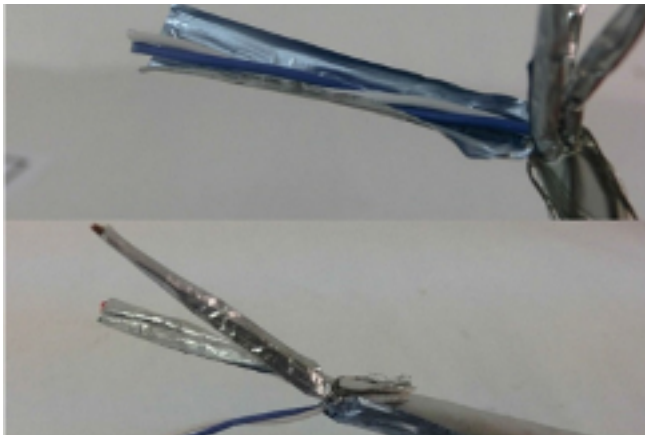**NOTE: The copper wires are wrapped in four sections with foil.**

9.2
Mark a cut location on the cable 1 1/2" from the end. Trim the cable jacket with a razor blade, being careful not to cut the inner shield foil.
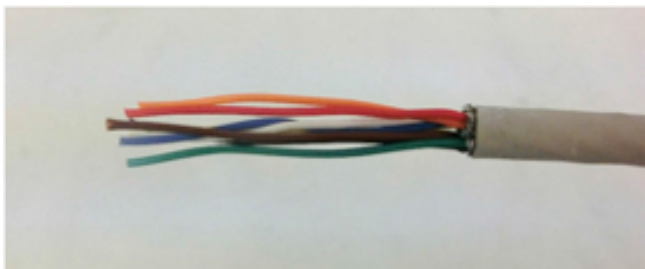

9.4
Spread the four section apart, make a small cut as close as possible to the jacket on each of the foils.

9.5

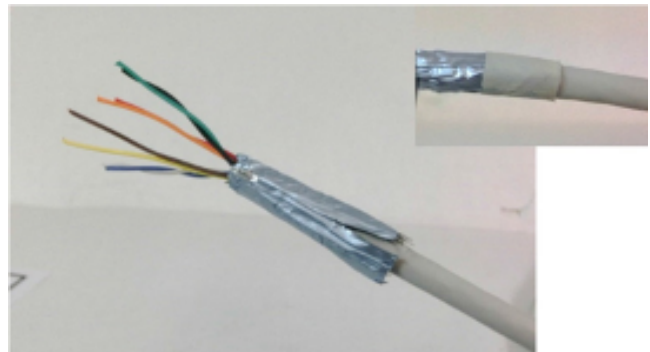Unwrap each of the foils on at a time and fold back over the braid.

NOTE: Careful not to take the foil off.

9.6

After folding all four foils back, tape the end of the foil to the cable.

9.7

FOR NON-SHIELDED CONNECTOR

After removing the outer jacket cut off the braid and all the foil.

9.8

Separate the eight copper members and arrange to the specific color code per EIA/TIA- T568B, in a horizontal format.

Starting from top to bottom the color code is as follows;

1) WHITE/ORANGE STRIPE

2) ORANGE

3) WHITE/GREEN STRIPE

4) BLUE

5) WHITE/BLUE STRIPE

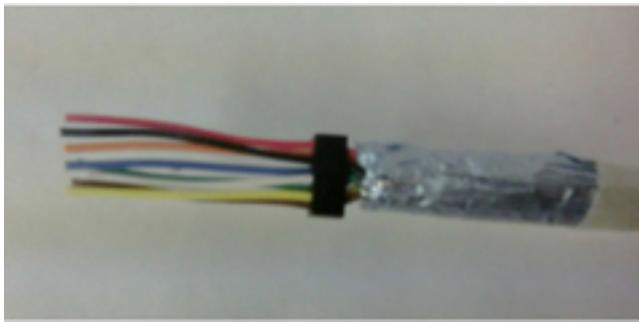6) GREEN

7) WHITE/BROWN STRIPE

8) BROWN

9.9

Locate the Shielded RJ-45 jack. Turn the Jack upside down, exposing the copper fingers. Note that the common numbering scheme for the RJ-45 jack EIA/TIA-T568A/B is 1 through 8, with the hook on the downside.

Therefore the color-coded wires and pin numbers for T568A and T586B are as follow;
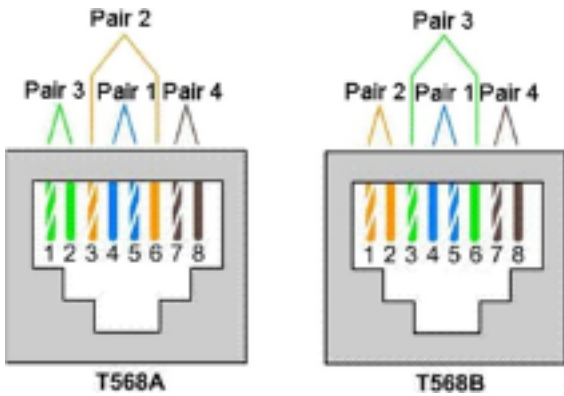
| Pin	T568A Pair	T568B Pair	Wire	T568A Color	T568B Color	Pins on plug face (socket is reversed)
1	3	2	tip	white/green stripe	white/orange stripe	
2	3	2	ring	green solid	orange solid	
3	2	3	tip	white/orange stripe	white/green stripe	
4	1	1	ring	blue solid	blue solid	
5	1	1	tip	white/blue stripe	white/blue stripe	
6	2	3	ring	orange solid	green solid	
7	4	4	tip	white/brown stripe	white/brown stripe	
8	4	4	ring	brown solid	brown solid	

NOTE: The only difference between T568A and T568B is that pairs 2 and 3 (orange and green) are swapped. Both configurations wire the pins "straight through", i.e. pins 1 through 8 on one end are connected to pins 1 through 8 on the end.

9.10
Insert the wire guide over the wires according to the
EIA/TIA-T568A or –T586B color coded wiring;

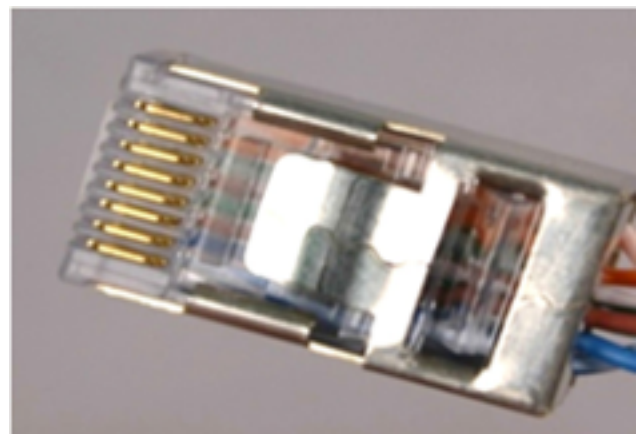| EIA/TIA-T568A	EIA/TIA-T568B
1-WHITE/GREEN STRIPE	1-WHITE/ORANGE STRIPE
2-GREEN	2-ORANGE
3-WHITE/ORANGE STRIPE	3-WHITE/GREEN STRIPE
4- BLUE	4-BLUE
5- WHITE/BLUE STRIPE	5-WHITE/BLUE STRIPE
6-ORANGE	6-GREEN
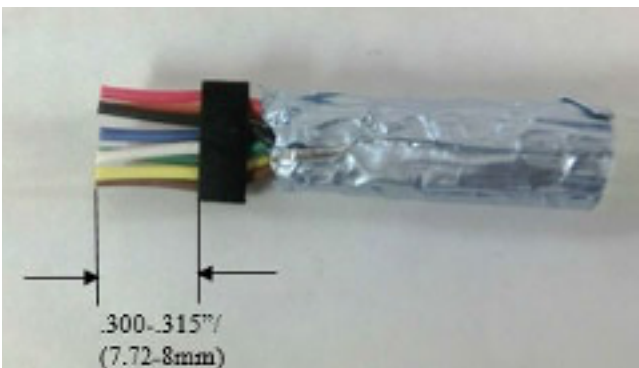
9.12
Trim wires to final length: .300-.315"/(7.72-8mm) (front
of wire guide to tip of wires.)
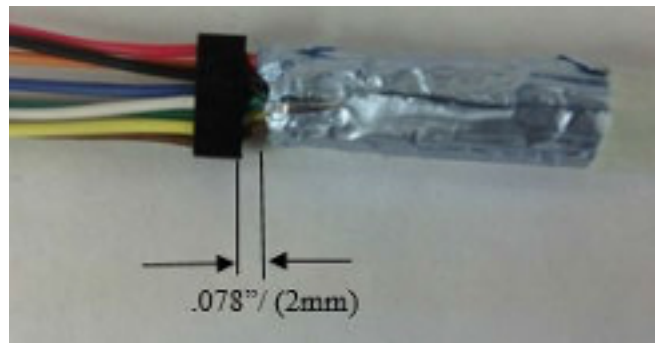
9.11
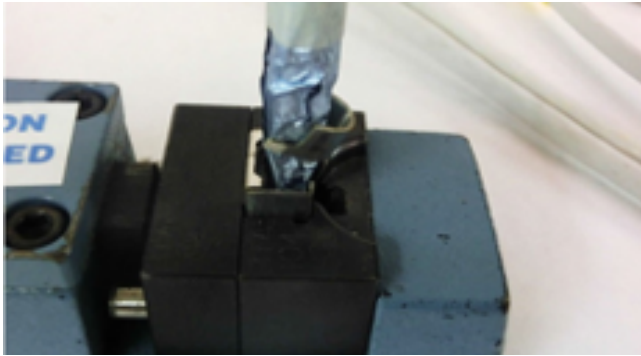Pull back wire guide towards cable jacket. Maximum
gap: .078"/ (2mm)

9.13
Route the eight copper wires in color coded sequence
into the rear of the RJ-45 jack.

Ensure that all eight members remain in horizontal
sequence as the wires are pushed up into the jack.

**Note: The wires must extend to the pin fingers as
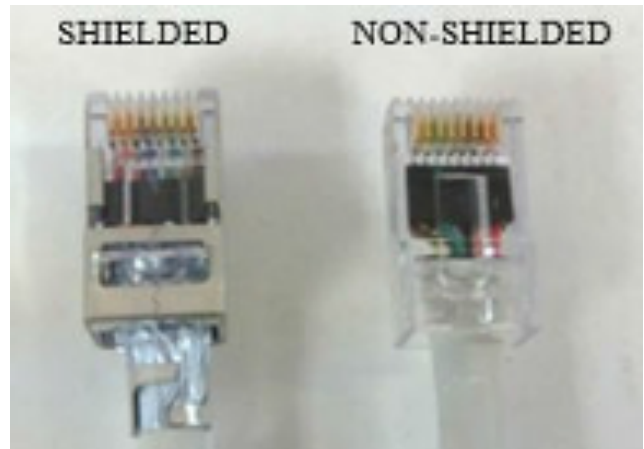seen thru the plastic R-J 45 clear plastic body.**

9.14
Once in place, push the RJ-45 connector assembly firmly into the RJ-45 crimp tool and compress the crimp handle to completely crimp the wire members in place.

9.15
Crimp the back of the RJ-45 with a .255 hex crimp die. **(shielded only)**
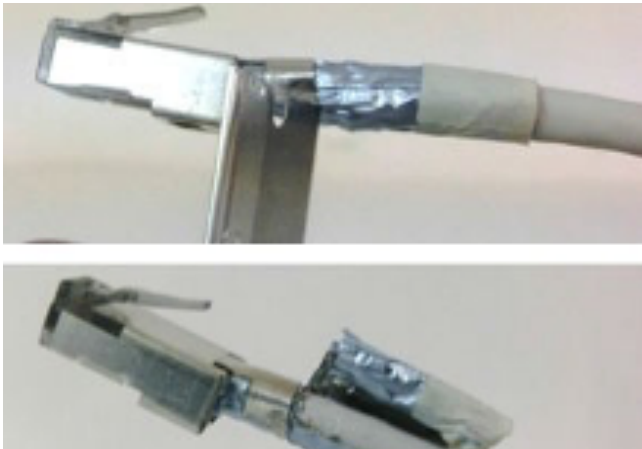
9.16
Remove the foil by gently cutting around the foil. **(shielded only)**

9.17
- The RJ-45 has been crimped.
- Test the assembly. (Not Shown)

9.18
Cut off the plastic hook on the RJ-45 connector.

9.19
Bring the inner wedge up towards the RJ-45 and slide the outer wedge up to mate with the inner wedge.

9.20
Locate the rear cap and slide the RJ-45 Jack through the rear cap until the rear cap butts up against the inner wedge, make sure the inner and outer wedge do not slide down.

9.21
Insert the RJ-45 into the back of the Inline Receptacle and screw the rear cap on.

9.22
Bring the sub assembly rear cap up towards the rear cap and only screw them hand tight.

9.23
Use a ¾" wrench and screw the rear cap until it bottoms out.

9.24
Bring the compression nut up to the back of the Rear Cap and screw the compression nut into the Rear Cap.

9.25
For final assembly, use a 3/8" wrench to tighten the compression nut

9.26
The R-JACK® CAT6 Inline Receptacle assembly is
now complete.

Product Support

For additional information please contact the L-com technical support team at
+1 (978) 682-6936 or visit our website at www.L-com.com.