WI-751-033 RJ45-Plug with Backshell

Installation Guide

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

- ECRA0211UA0
- ECRA0211UB0
- ECRA0213UA0
- ECRA0213UB0
- ECRA4211UA0
- ECRA4211UB0
- ECRA4213UA0
- ECRA4213UB0

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 RJ-45 Plug.

2. Scope

The scope of this document is to provide details to terminate and assembling the RJ-45

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

WI-622-004 Glossary of Fiber Optic Terms

6. Responsibility

Manufacturing and Engineering Management

7. Tools, Fixtures, Consumables

- Marker
- Ruler
- Wire Cutter
- Scissor
- RJ-45 Crimp Tool
- 0.255 Hex Crimp
- Solder Iron (used with drain wire only)
- 9/16" Hex Wrench
- 3/8" Hex Wrench
- Use ECRD, ECRJ, ECRK or ECRP 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.
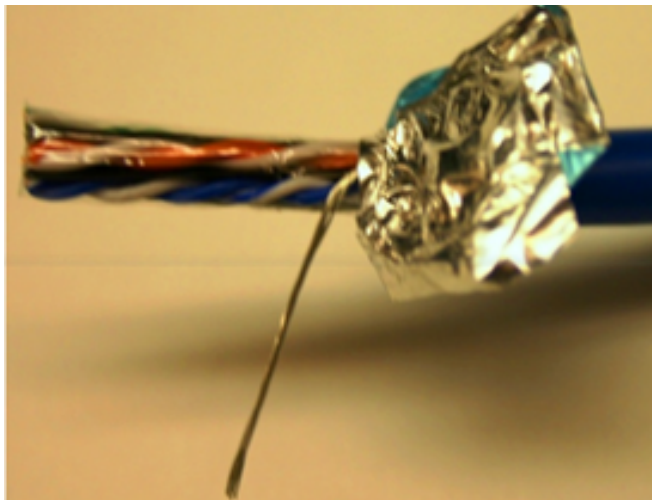
9. Cable Preperation
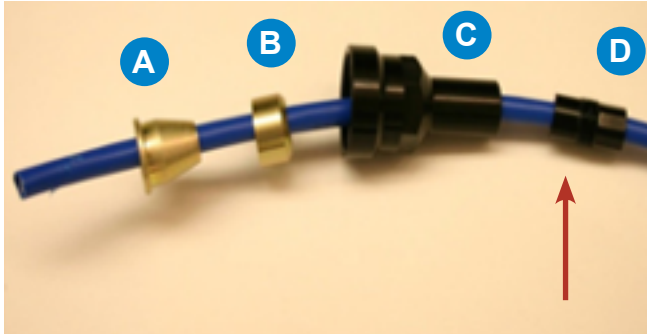
9.1
Place the connector members of the OCC Inline Receptacle connector onto the cable oriented from left to right as follows:|

A. Inner Wedge

B. Outer Wedge

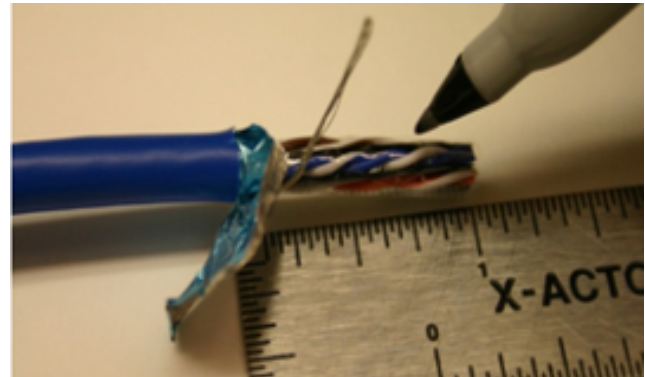C. Sub Assembly Reap Cap

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.


9.2
Mark a cut location on the cable 1 1/4" from the end. Trim the cable jacket with a razor blade, being careful not to cut the inner shield foil.

9.4
Mark the copper wires ¼" from the end. Use a pair of wire cutters and cut the ends off square (perpendicular) to the cable

9.3
Once the outer jacket is removed, peel back the foil shield and the Drain wire. The copper wires are wrapped in two sections with clear plastic. Remove the clear plastic back to the cable jacket.
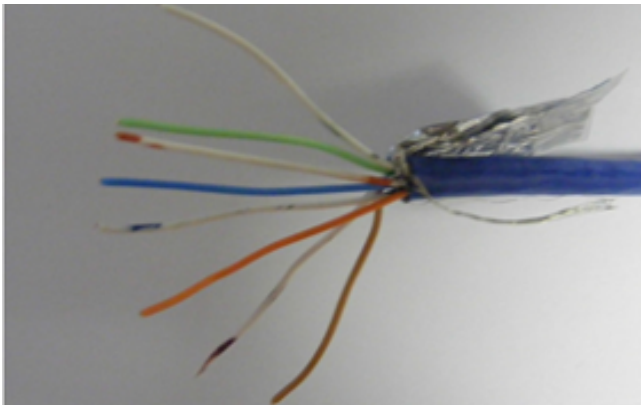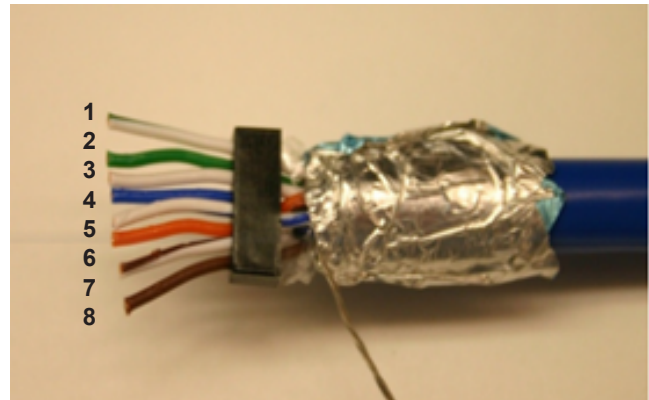
9.5

Separate the eight copper members and arrange to the specific color code per (EIA/TIA- T568A), 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

9.6

PIN OUT FOR EIA/TIA-T568A SHOWN

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
7-WHITE/BROWN STRIPE	7-WHITE/BROWN STRIPE
8-BROWN	8-BROWN

9.7

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:
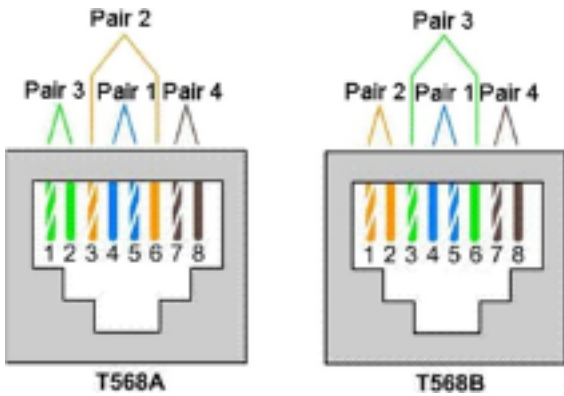
Pin	T568A Pair	T568B Pair	Wire	T568A Color	T568B Color	Pins on plug face (socket is reversed)
1	3	2	tip	white/green stripe	white/orange stripe	
2	3	2	ring	green solid	orange solid	
3	2	3	tip	white/orange stripe	white/green stripe	
4	1	1	ring	blue solid	blue solid	
5	1	1	tip	white/blue stripe	white/blue 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.
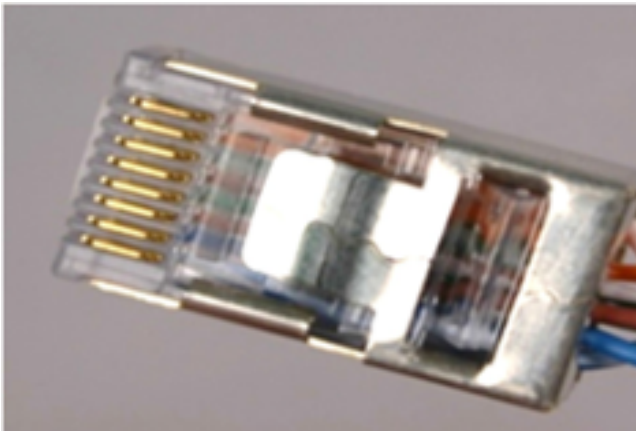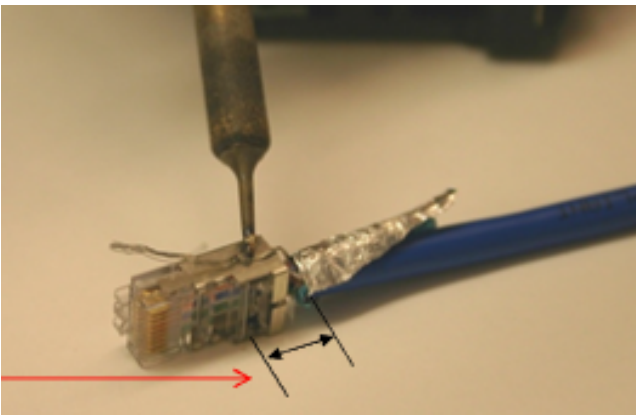
9.8
Route the eight copper wires in color coded sequence into the rear of the RJ-45 jack.

Ensure that all eight members remain in horizontal sequence as the wires are pushed up into the jack.
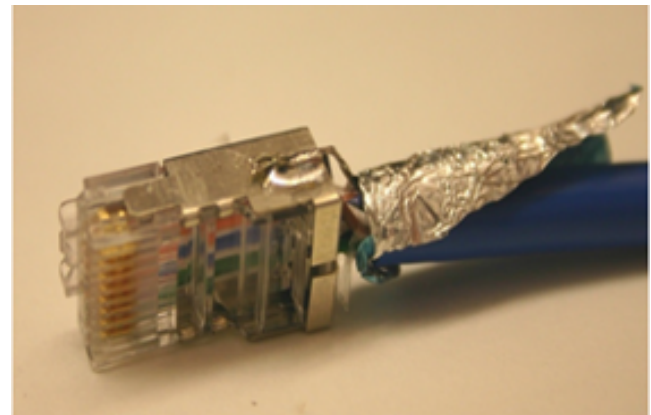
Note: The wires must extend to the pin fingers as seen thru the plastic R-J 45 clear plastic body.

9.9
Pull back wire guide towards cable jacket. Maximum gap: .078"/ (2mm)

9.10
Lay the drain conductor onto the side of the shielded Lay the drain conductor onto the side of the shielded RJ-45 jack as shown and solder it to the shield. The location should be ¼" from the back of the jack.

9.11
Lay the drain conductor onto the side of the shielded RJ-45 jack as shown and solder it to the shield. The location should be ¼" from the back of the jack.
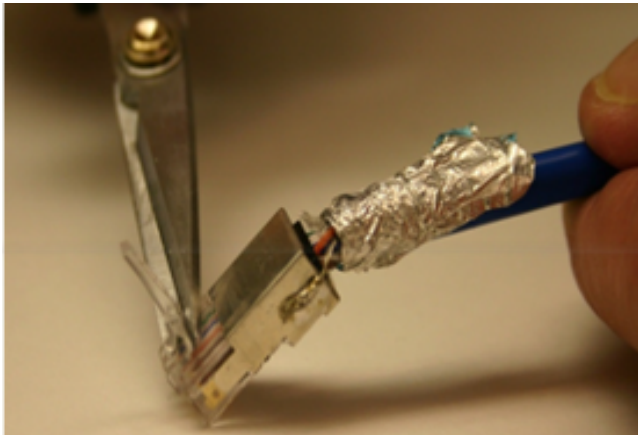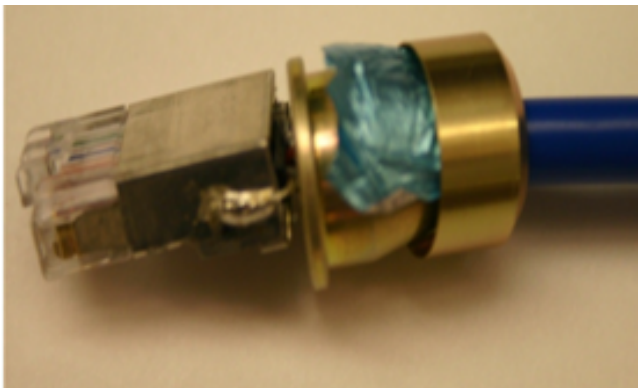
9.12
After removal of the drain wire, cut off the plastic hook on the RJ-45 plug body.

9.13
The RJ-45 plug body should look like this with the drain wire soldered and excess wire removed. The plastic hook should look like this as well**.**

9.14
Bring the inner wedge up and route the foil shield through the wedge opening, and bend foil over the outside edge of the inner wedge. Slide up the outer wedge up to mate with the inner wedge and "sandwich" the foil between the inner and outer wedge.)

9.15
At this point locate the dust cap and place lanyard loop over RJ-45 plastic plug and wedge assembly .Locate the plug and slide the RJ-45 jack into the rear of the plug body. Bring the rear cap up towards the plug body and only screw them hand tight.

9.16
Use an RJ-45 Receptacle and slide the RJ-45 jack Assembly into the receptacle. Tighten the coupling nut.
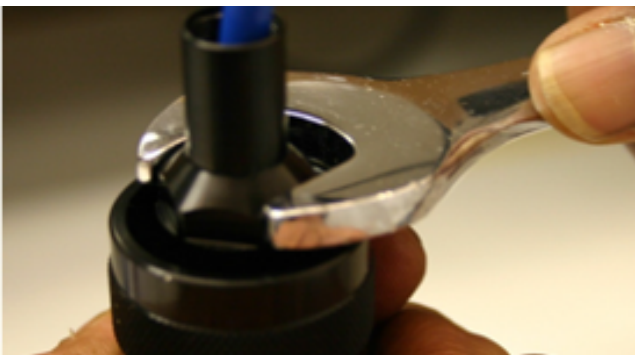
NOTE: Any ECRD, ECRJ, ECRK or ECRP Receptacle can be used to secure Plug during final assembly.

9.17
The receptacle will allow the RJ-45 plastic assembly to be held in place while the Rear Cap is tightened down.

Note: it is important that the RJ-45 plastic assembly not be allowed to rotate.

9.18
Use a 9/16" wrench and screw the rear cap until it bottoms out.

9.19
Bring the compression nut up to the back of the Rear Cap and screw the compression nut into the Rear Cap.

9.20
For final assembly, use a 3/8" wrench to tighten the compression nut.

9.20
The ECRA Plug 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.