In-Person Lab - Create an ANSI/TIA-568 Crossover Ethernet Cable

Introduction

Cables make the network's IP packets go around.

To further experience working with copper twisted pair ethernet cables in this lab, you will create and test a crossover cable. .

Objectives

- Create an ANSI/TIA-568 crossover Ethernet cable.
- Test an ANSI/TIA-568 crossover Ethernet cable

Equipment/Requirements

- Learner Tech Kit.
- A cellphone with a camera.

Part 1: Create and test an ANSI/TIA-568 crossover Ethernet cable.

a. *Set up your working environment. Ensure that there is adequate lighting, and have your tools available.*

b. *Use the Make an Ethernet cable document to guide you through the cable-making process.*

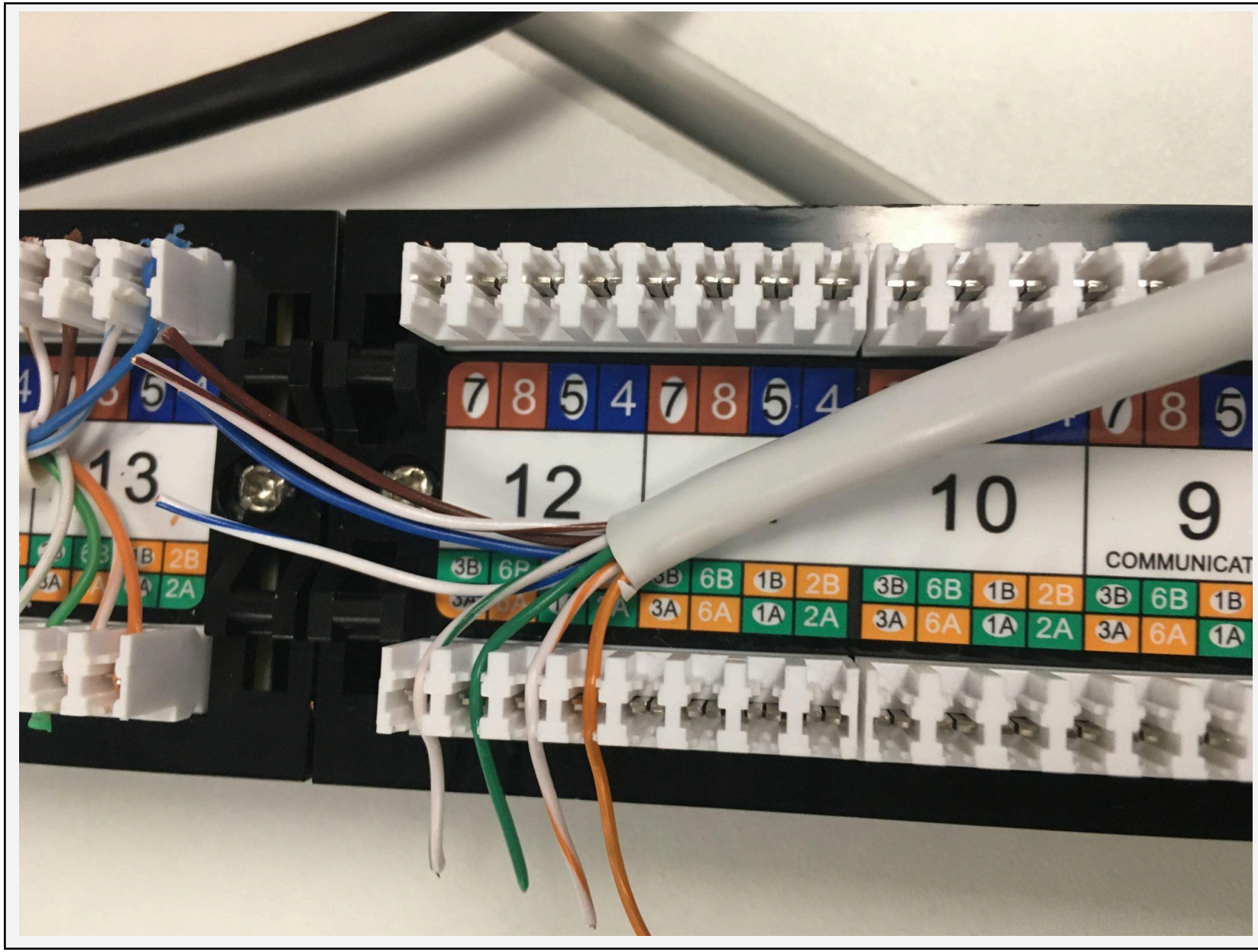
c. *Once you have a working ANSI/TIA-568 crossover Ethernet cable, use your smartphone to take a picture of the cable - zoom in on the connectors if possible. Place the image in the box below.*

I focused on switch 12 of the IDC block and TIA-568B.

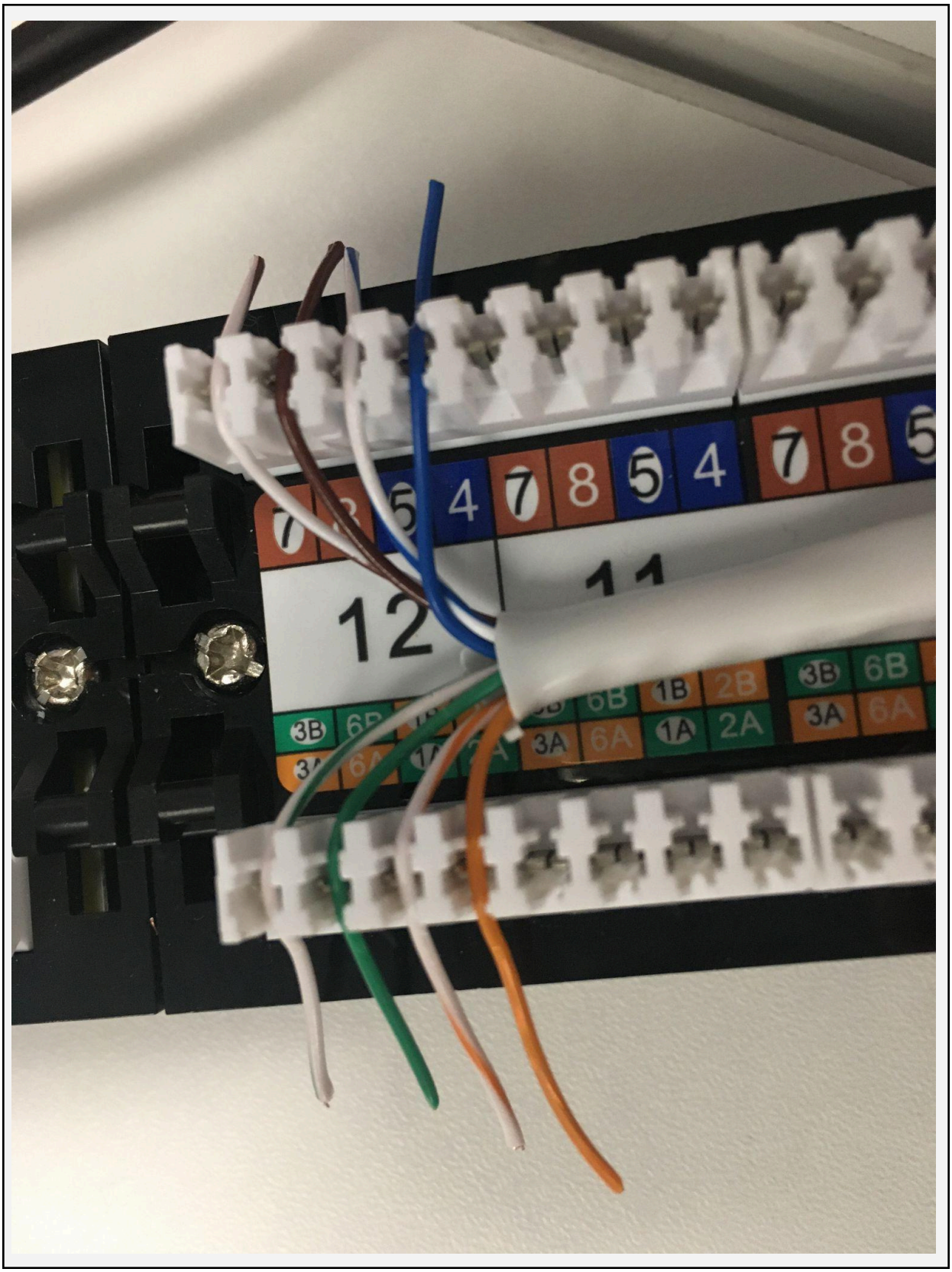
On the left, I pulled striped green in 3B node, solid green in 6B node, striped-orange wire in node 1B, and solid-orange wire in node 2B. On the right side of the IDC block, I threaded the striped-brown wire in node 7, solid-brown wire in node 8, striped-blue wire in node 5, and last solid-blue wire in node 4.

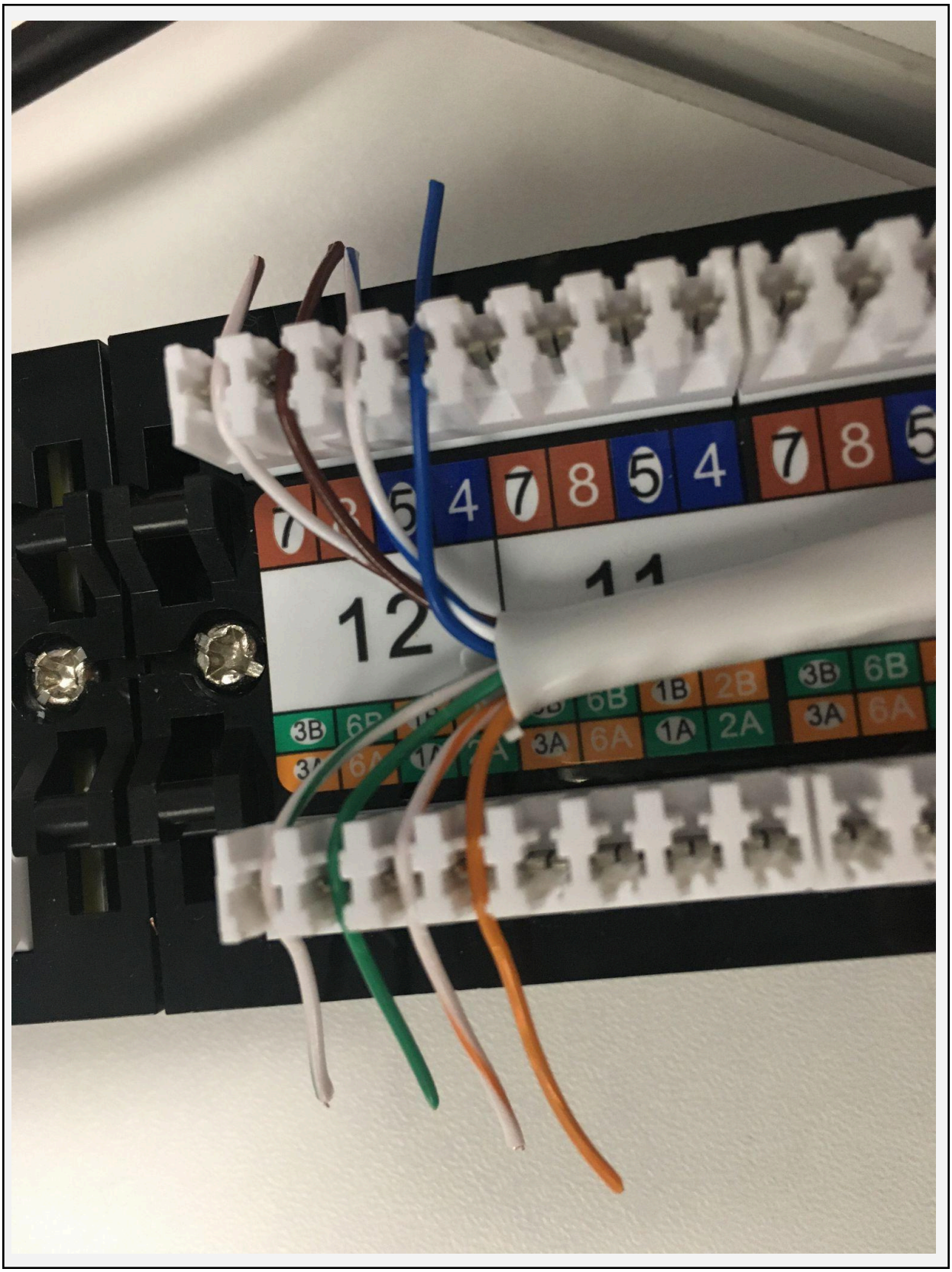
7 8 5 4 7 8 5 4 7 8 5 4 7 8
12
11
10
9
3B 6B 1B 2B 3B 6B 1B 2B 3B 6B 1B 2B 3B 6B 1B 2B 3B 6B
3A 6A 1A 2A 3A 6A 1A 2A 3A 6A 1A 2A 3A 6A 1A 2A 3A 6A
COMMUNICATION CIRCUIT ACC

On the left, I pulled striped green in 3B node, solid green in 6B node, striped-orange wire in node 1B, and solid-orange wire in node 2B.


13
12
10
9
COMMUNICAT
3B 6B 1B 2B
3A 6A 1A 2A

On the right side of the IDC block, I threaded the striped-brown wire in node 7, solid-brown wire in node 8, striped-blue wire in node 5, and last solid-blue wire in node 4.


12
11
3B
6B
1B
2B
3A
6A
1A
2A


12
11
3B
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1B
2B
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6A
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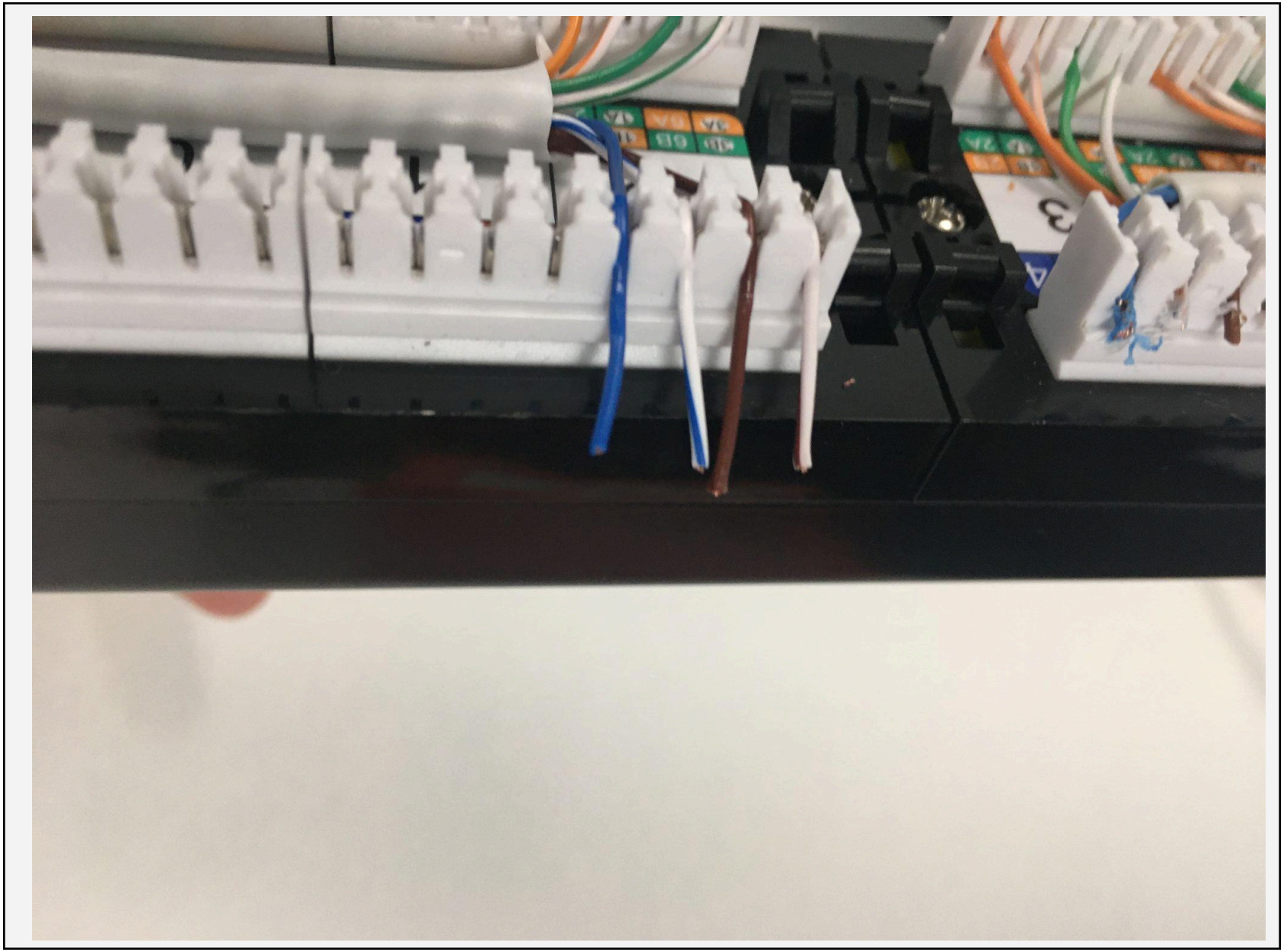
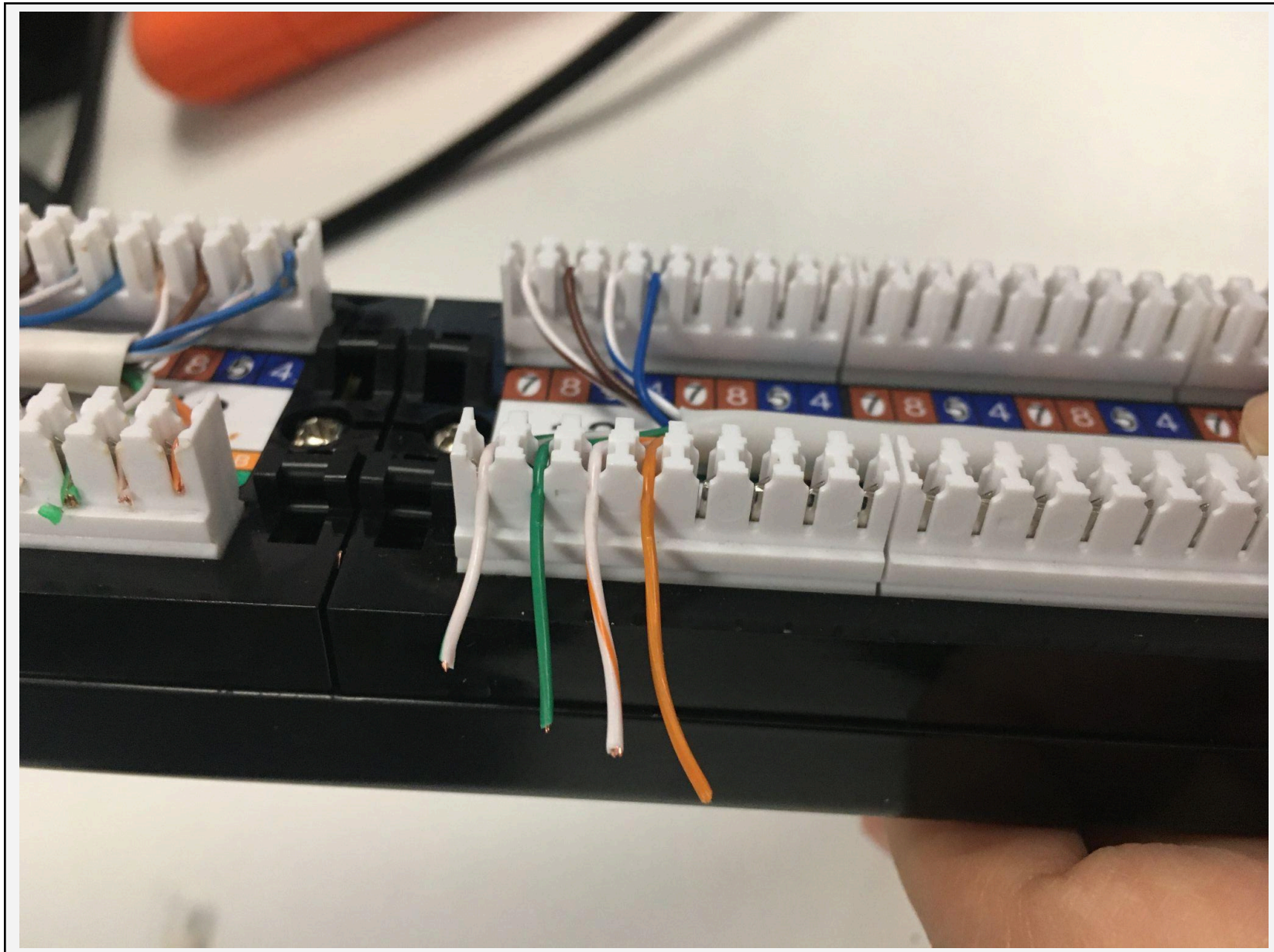
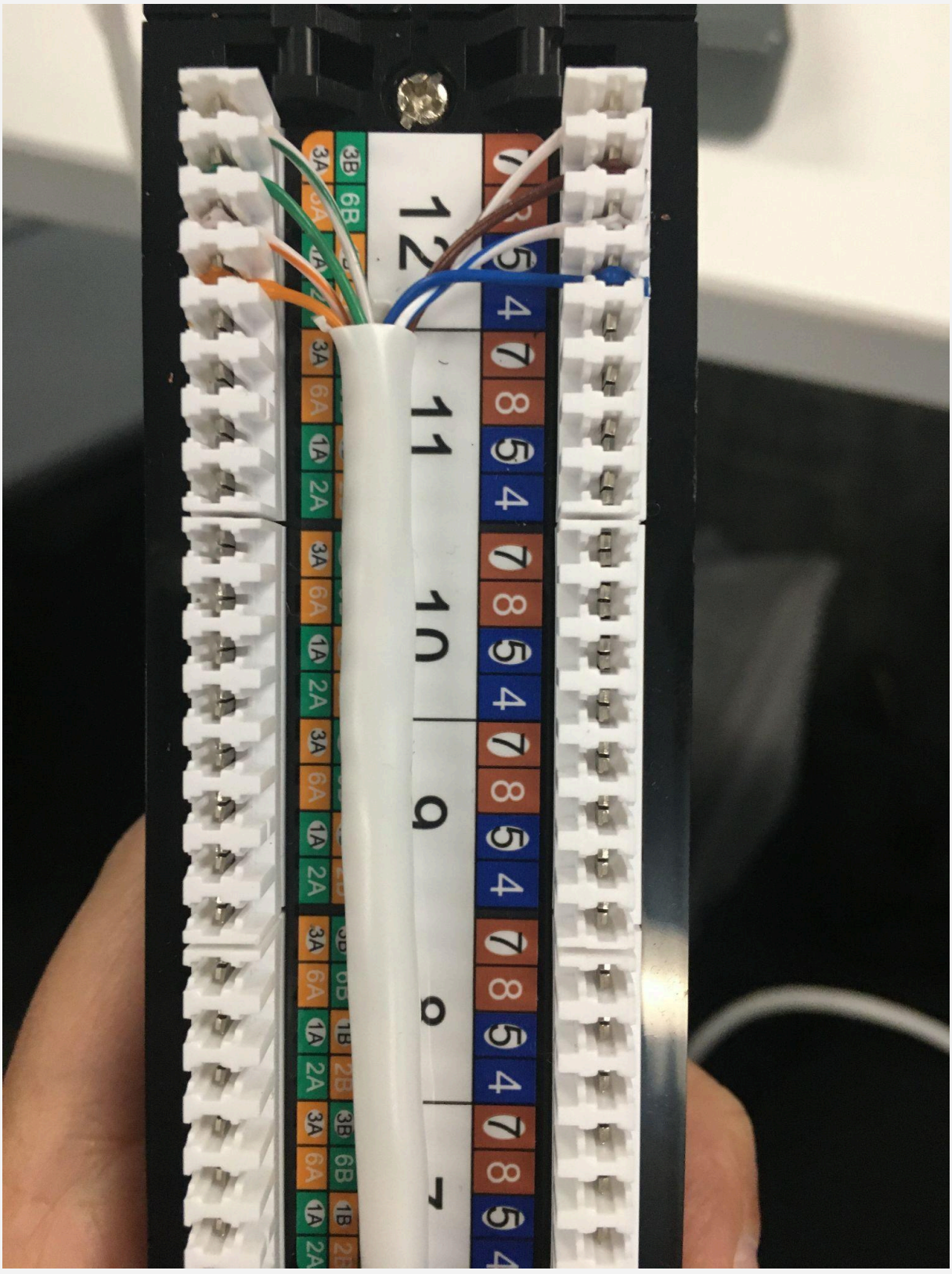
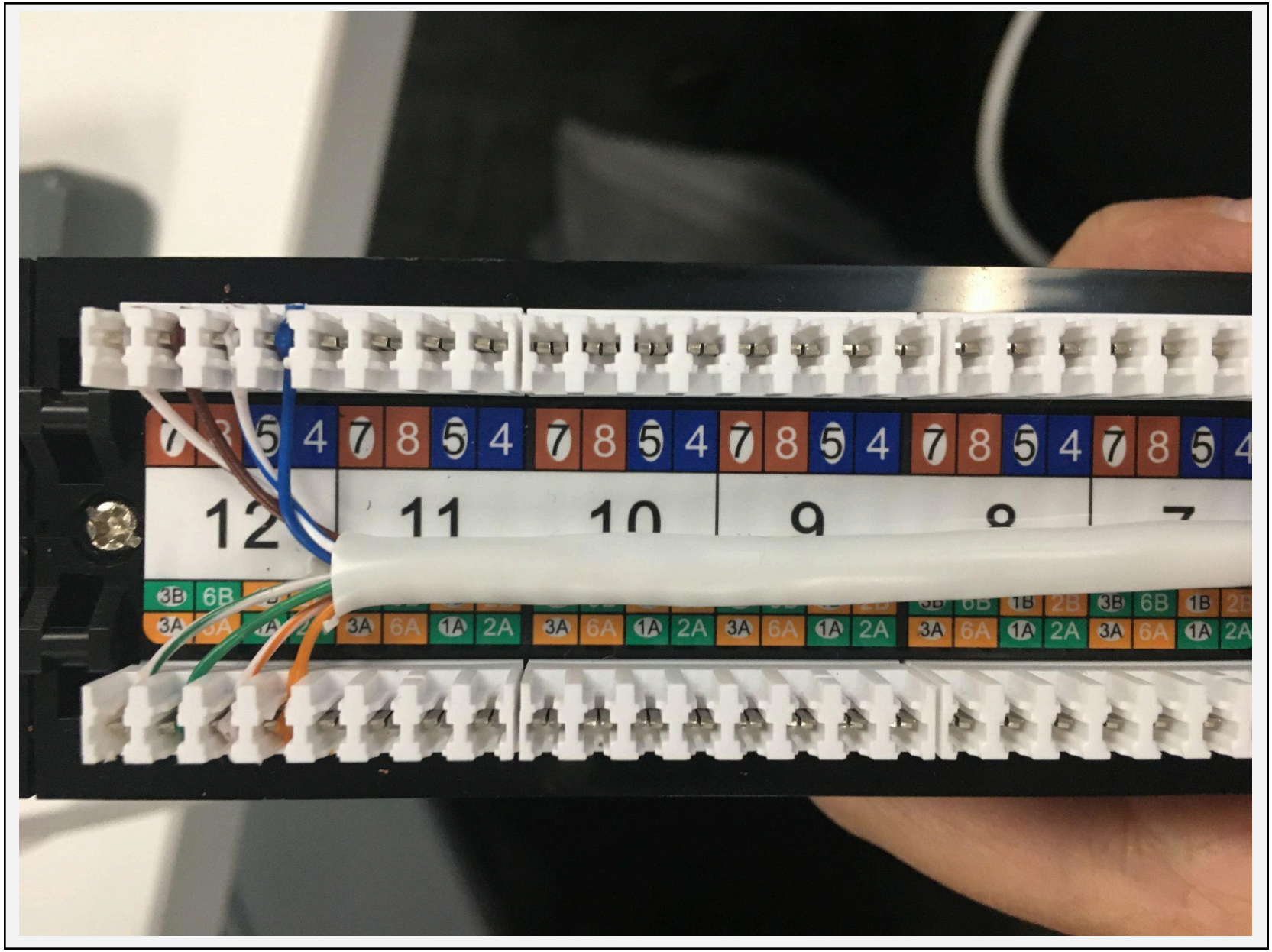
2A




8 4
8 4
8 4
8 4
8 4

I had team members verify that this was correct before using the “punch-down tool” to secure and cut the wires.




12
11
10
9
8
7
3B 6B 1B 2B
3A 6A 1A 2A

CABLE TESTER
RJ45+RJ11
Plug wire
1
2
3
4
5
6
7
8
G
S
ON
OFF
MASTER
NSHL916DC-AL
UbiGear
CABLE TESTER
RJ11+RJ45
REMOTE

CABLE TESTER
RJ45+RJ11
Plug wire
S
ON
OFF
1
2
3
4
5
6
7
8
G
MASTER
NSHL916DC-AL
UbiGear
CABLE TESTER
RJ11+RJ45
REMOTE

d. *In your own words, explain in what scenario you would use an ANSI/TIA-568 crossover Ethernet cable and not a straight-through Ethernet cable. Type the explanation into the box below.*

This system would be used in an enterprise environment to keep track and secure the computer equipment employees would use. It also facilitates faster internet because of the switches allowing less collisions. The switches would organize the network.

Part 2: Clear the workbench.

We hope you enjoyed this lab. The time to clean up has come.

a. *Gather all of the tools and personal belongings.*

b. *Ensure that your work area is tidy and clean.*