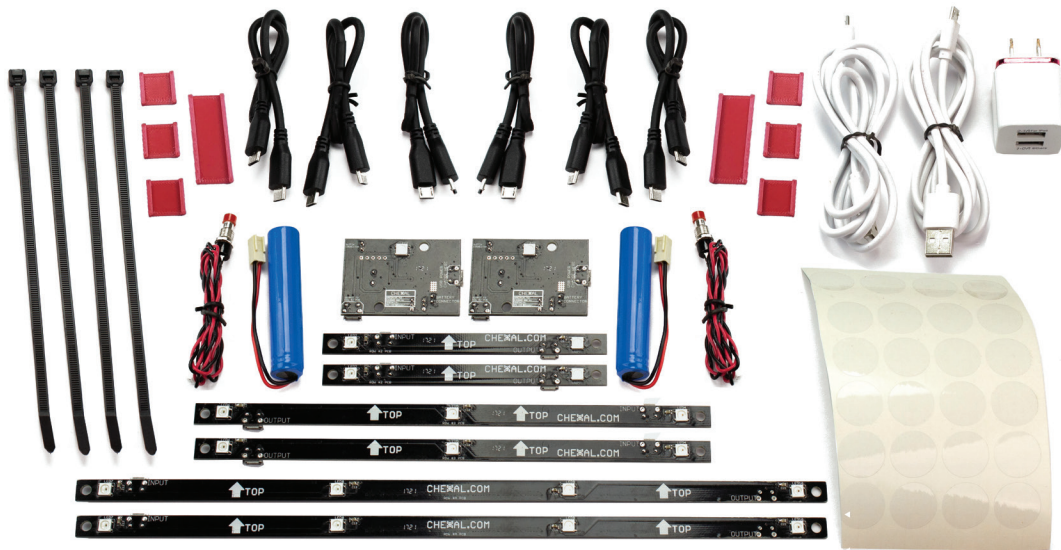# Electronic Installation Guide

RaveTable-Mini LED Beer Pong Table

003-1200-1.0

⚠️IMPORTANT:

Read through this installation guide carefully before assembling this product. Pay close attention to the complete table layout.

Ensure that you follow all proper safety instructions which adhere to the tools that you will be using to install the RaveTable-Mini DIY Kit.

Failure to obey any safety warnings for the tools that you are using to construct this table may result in serious injury.

Introduction

This instruction manual will guide you through the steps of installing a RaveTable-Mini LED Beer Pong Table Kit in a generic folding beer pong table that can be purchased through various local and online retailers (like Amazon).

The following knowledge and skills will help aid you through this project:

• Knowing how to use basic hand tools (Drill, Wire Cutters, etc.)
• Knowing how to follow assembly/installation instructions

The following tools are required for this installation guide:

• Drill
• 1/8" (3mm) Drill Bit
• 5/16" (8mm) Drill Bit
• Flush Cutters or Scissors

Do not complete any of the assembly steps with powered electronics. Until you are ready to test the table, keep the battery and charging port disconnected.
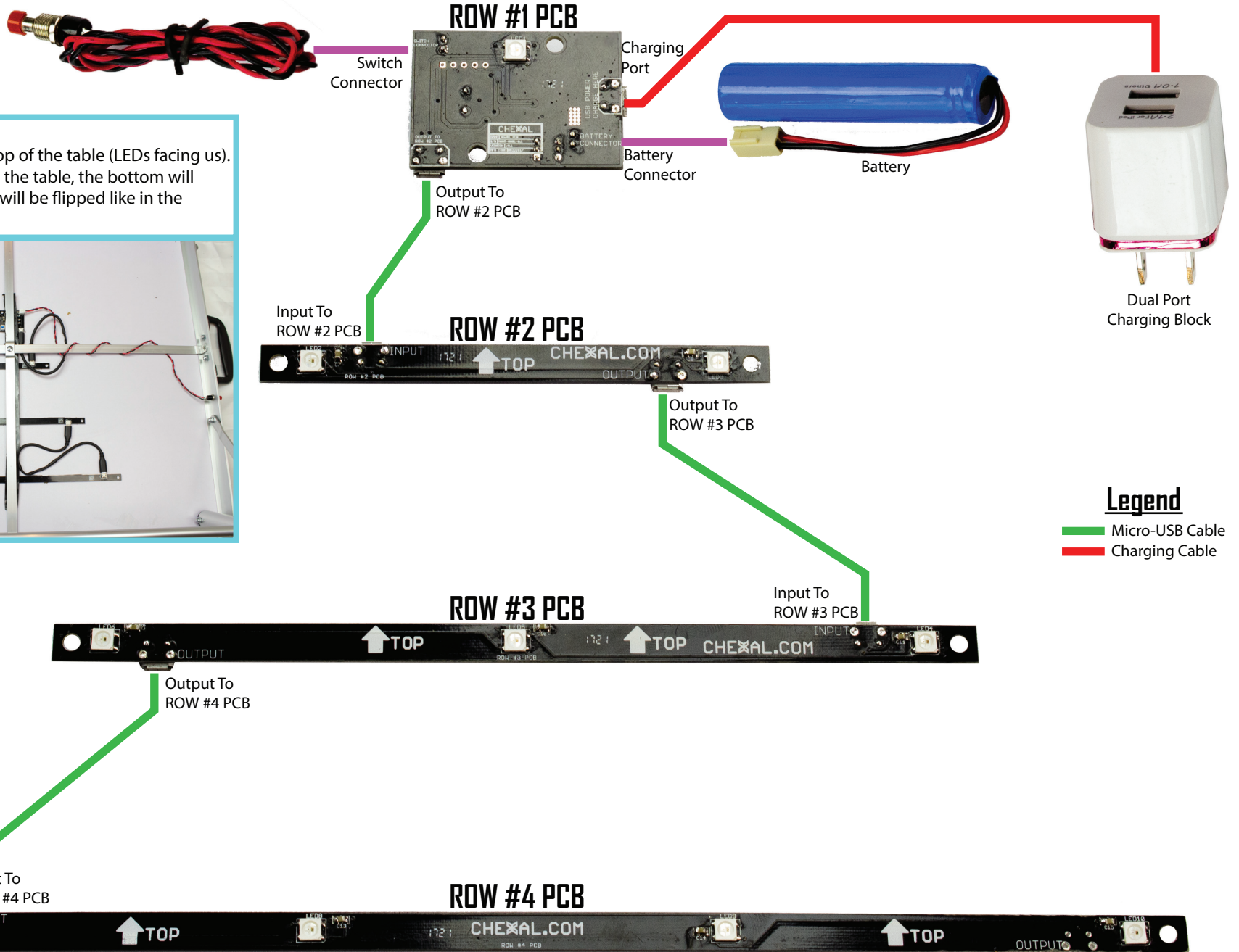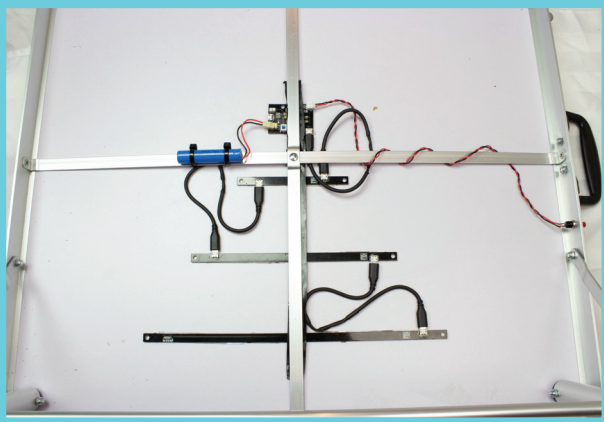
Do not do this installation in a space where there is carpet since static electricity can damage electronic components. Laminate, concrete or hardwood floor are all fine. Only handle the PCBs on the outer edges of each board to mitigate this risk.

Do not touch any of the components on the PCB as there is a risk of damaging that component with static electricity.

Bill of Materials	
Part (Hardware)	**Qty**
ROW #1 PCB w/ Double Sided Tape	2
ROW #2 PCB w/ Double Sided Tape	2
ROW #3 PCB w/ Double Sided Tape	2
ROW #4 PCB w/ Double Sided Tape	2
Micro USB Connecting Cable	6
Rechargeable Battery	2
USB Charging Cable	2
Dual Port Charging Block (110V)	1
7" Black Zip-Ties	4
Pushbutton Switch	2
Red Plastic Insulator Set	2
RaveTable-Mini Drilling Template	1

RaveTable-Mini Connection Diagram For Each Side Of The Table

ROW #1 PCB

Switch Connector

Charging Port

Battery Connector

Battery

Dual Port Charging Block

Output To ROW #2 PCB

Note:
This diagram is from the top of the table (LEDs facing us). When installing these into the table, the bottom will be facing us and the view will be flipped like in the image below.

Input To ROW #2 PCB

ROW #2 PCB

TOP

OUTPUT

Output To ROW #3 PCB

Legend
Micro-USB Cable
Charging Cable

Input To ROW #3 PCB

ROW #3 PCB

OUTPUT

TOP

TOP

INPUT

CHEXAL.COM

Output To ROW #4 PCB

Input To ROW #4 PCB

ROW #4 PCB

INPUT

TOP

CHEXAL.COM

TOP

OUTPUT

Installation Guide

Grab your beer pong table that you've either built or purchased and get ready to install the RaveTable-Mini LED Beer Pong Table Kit into it to make it come alive! It doesn't take very long to get everything installed and up and running, so don't fret!

When it comes time to run the cables between the PCBs, use the diagram on *page 2* as a reference if you are unclear about any of the connections. Take your time and the install should be pretty straight forward.

Ensure that you have the required hardware (listed on *page 1*) and tools on hand and then proceed through the following steps to complete the installation.

1

First, we will begin by drilling the pilot holes for the LEDs in the table top. Take the Drill Template and line it up so that it is centered on one end of the table (*Figure 1.1*).

Once you have the Drill Template in its correct location, install the 1/8" (3mm) drill bit into the drill and line it up on the crosshairs at the center of the cup at the top of the pyramid (*Figure 1.2*). Double-check that the bit is exactly on the crosshair and lightly drill through the table top. As soon as you are through the table top, stop drilling. There may be an aluminum support underneath this hole but you are not required to drill through it. Repeat this process for the remaining nine cup locations (*Figure 1.3*).

After all of the 1/8" (3mm) pilot holes have been drilled, **REMOVE** the template from the table. We still need to use the template for the other side so do not discard it. Put the 5/16" (8mm) drill bit into the drill and proceed to drill out all 10 cup locations, widening the existing 3mm holes (*Figure 1.4*). Clean off any wood debris off the table top when all of the holes have been drilled out.

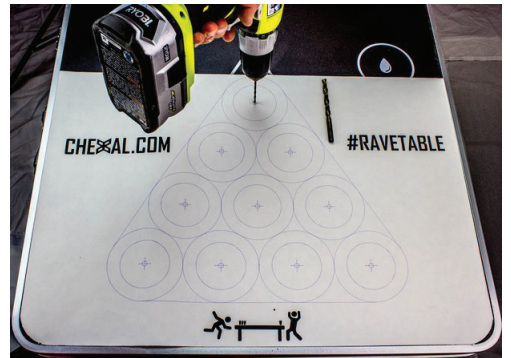Repeat this exact same process for the other side of the table.

Figure 1.1

Figure 1.2

Figure 1.3

Figure 1.4

2

Now that all of the LED holes are drilled out, we can flip the table over and get ready to install the electronics (*Figure 2.1*). The beer pong table that we are using in this instruction manual has aluminum crossmembers under the top sheet. The center and top pyramid LED holes are underneath the aluminum cross-member. This doesn't prove to be an issue as we can fit our parts underneath it (*Figure 2.2*) and as long as we insulate the electronics from the aluminum (which we will do a little later on).

Figure 2.1

Underneath the cross-members
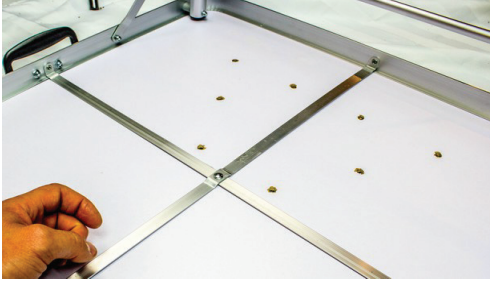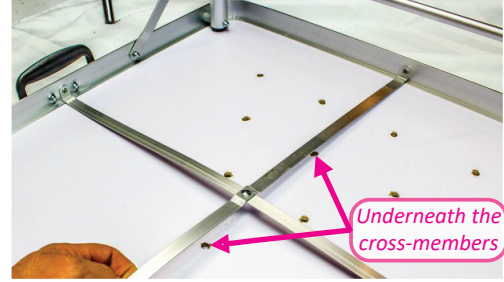
Figure 2.2

3

Remove the backing on the double-sided tape from all of the PCBs. The sticky adhesive should now be exposed (*Figure 3.1*).

Take the **ROW #4 PCB** and move the other PCBs out of the way for now. Line up the PCB on its edge while sliding it underneath the aluminum crossmember, making sure that each LED is lined up with its respective hole location. The "TOP" arrows on the PCB should be pointing towards the ceiling at this point (*Figure 3.2*).

Once it is lined up properly, lay the PCB flat against the table while ensuring that the LEDs are sticking into their respective holes. After it is in its correct position, run your finger across the PCB with light pressure to ensure that it is sticking to the table. The **ROW #4 PCB** has now been installed in the table (*Figure 3.3*).

Repeat the exact same process for the **ROW #3 PCB**. For this row of LEDs, the center LED will be directly underneath the aluminum crossmember (*Figure 3.4*).

Repeat the same process for the **ROW #2 PCB** and then get ready to install the **ROW #1 PCB** (*Figure 3.5*). This PCB can be a little trickier to install because there is only one LED on top of it. It
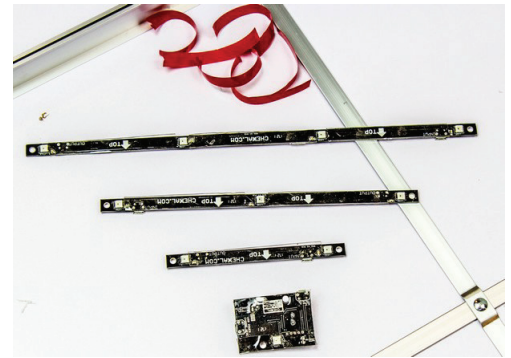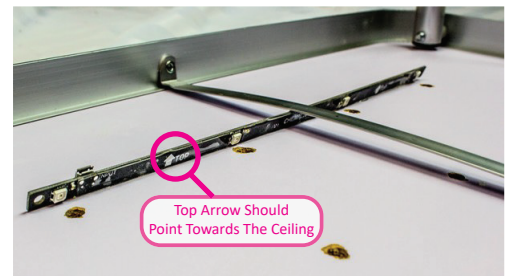
Figure 3.1

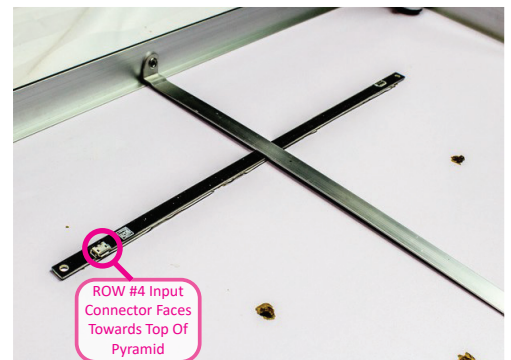*Top Arrow Should Point Towards The Ceiling*

Figure 3.2

ROW #4 Input Connector Faces Towards Top Of Pyramid

Figure 3.3

3

Flip the **ROW #1 PCB** over so that the LED is ready to be placed in the hole. Use one hand to slightly lift the aluminum crossmember and carefully place the **ROW #1 PCB** into its correct location (*Figure 3.6*). Double check that the LED is lined up with the hole and then apply light pressure to the PCB to make sure that the adhesive sticks tightly to underside of the table.

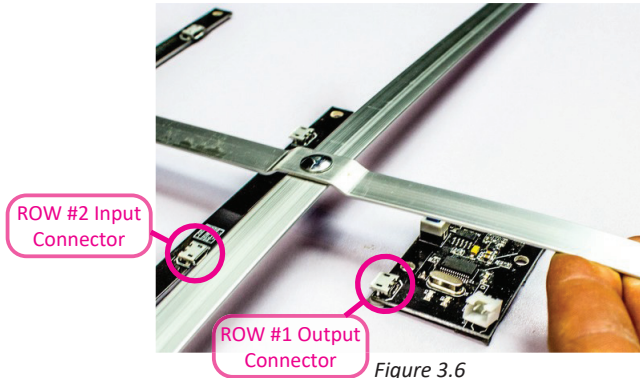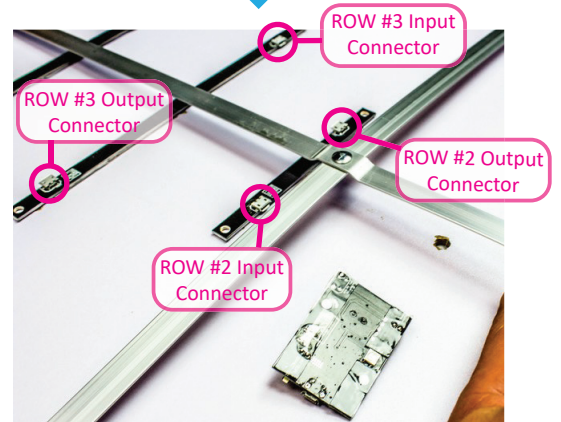Double check that all of the INPUT/OUTPUT connectors are in the correct location when you are finished.

ROW #3 Input Connector

Top Arrow Should Point Towards The Ceiling

Figure 3.4

ROW #3 Input Connector

ROW #3 Output Connector

ROW #2 Output Connector

ROW #2 Input Connector

Figure 3.5

ROW #2 Input Connector

ROW #1 Output Connector

Figure 3.6

4

⚠️ **CAUTION**
This step is only required for tables that have crossmembers

Note: This step was originally done with electrical tape but has since been changed. The example photos that come after this step will not have the red insulators in them for this reason. If your table has aluminum crossmembers, DO NOT skip this step as it is a required safety feature.

Aluminum conducts electricity and therefore could cause the circuit to malfunction if it creates a connection between two points. To prevent this, we will install red insulators between the PCBs and the crossmember (*Figure 4.1*).

Prop the aluminum crossmember up and snap on the insulator for the **ROW #4 PCB** (*Figure 4.2*). Do the same for the **ROW #3** and **ROW #2 PCBs** (*Figure 4.3*).

Finally, repeat the process for the **ROW #1 PCB.** This insulator is larger as it has to span across the whole **ROW #1 PCB**. Make sure that each insulator is fully covering its respective PCB (*Figure 4.4*).
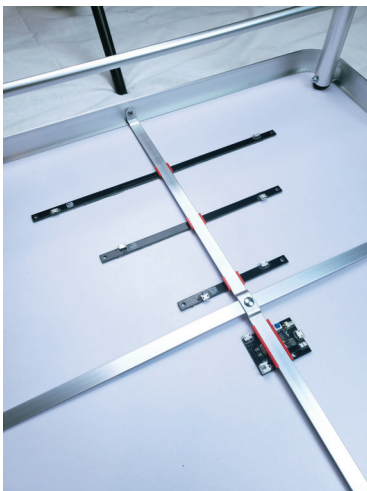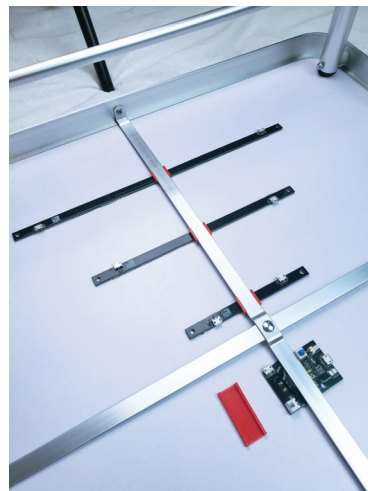

Figure 4.1

Figure 4.4

Figure 4.3

Figure 4.2

5

We are now ready to install the micro USB cables and connect each ROW PCB to one another.

Connect the **ROW #1 PCB** *"OUTPUT"* to the **ROW #2 PCB** *"INPUT"* connector with a micro USB cable (*Figure 5.1 & Figure 5.2*).

The **ROW #2 PCB** *"OUTPUT"* then connects to the **ROW #3 PCB** *"INPUT"* connector.

Finally, the **ROW #3 PCB** *"OUTPUT"* connects to the **ROW #4 PCB** *"INPUT"* connector (*Figure 5.3*).

Connections
(A) ROW #1 OUTPUT ➡ ROW #2 INPUT
(B) ROW #2 OUTPUT ➡ ROW #3 INPUT
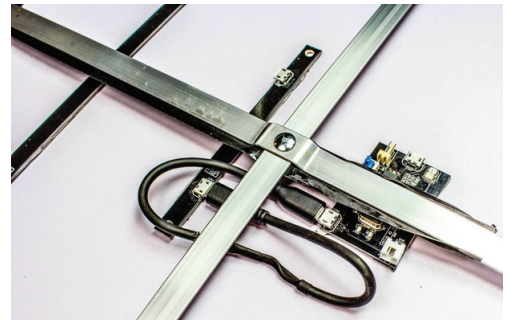**(C)** ROW #3 OUTPUT ➡ ROW #4 INPUT
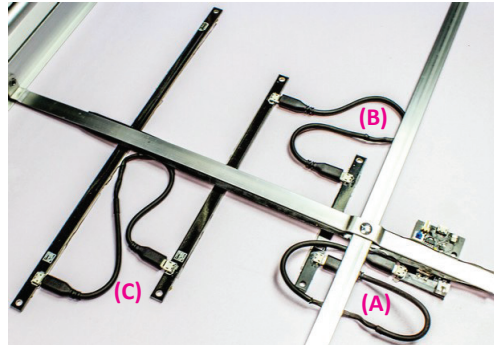
Figure 5.1
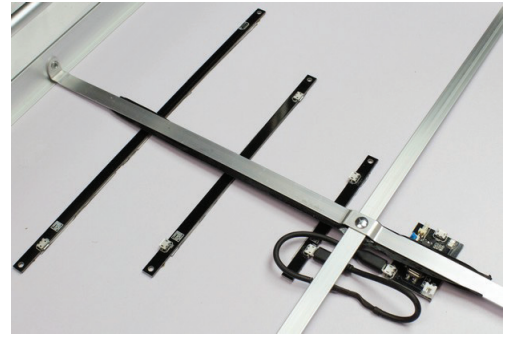
Figure 5.2

Figure 5.3

6

Now we'll install the pushbutton switch that allows us to change the modes of operation. Take the 5/16" (8mm) drill bit that we used in *Step #1* and insert it into your drill.

Locate a position on the table where, once installed, the pushbutton will be unobstructed when the table is folded or set up. On this particular table, centered between the carrying handle and the leg hinge is a perfect place for our pushbutton (*Figure 6.1*).

While applying firm pressure to the aluminum, slowly drill out the pushbuttons hole in the desired location.

Next, unscrew the nut and the split washer off of the pushbutton (*Figure 6.2*).

Insert the pushbutton into the hole that you just drilled and center it as best as possible (it will have a little bit of wiggle room). Take the split washer and put it on the pushbutton and then do the same thing with the nut. Tighten the nut to secure the pushbutton in place (*Figure 6.3*).
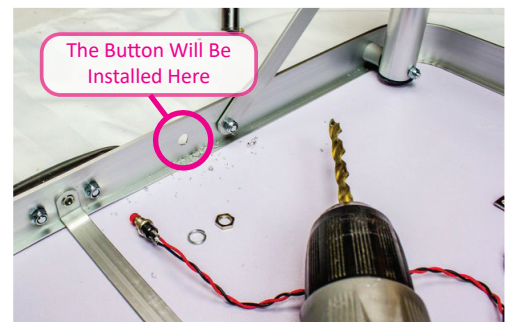

Figure 6.1

The Button Will Be Installed Here
Figure 6.2

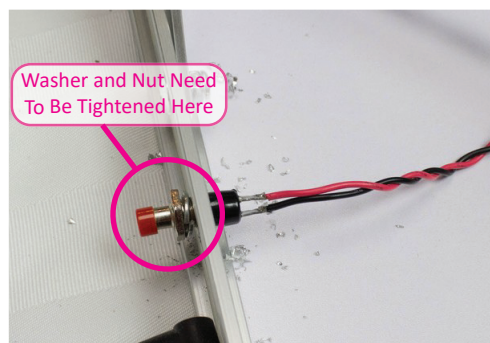Washer and Nut Need To Be Tightened Here
Figure 6.3

7

Next, we'll install the battery. Get two zipties and one battery (*Figure 7.1*) and connect the battery plug into the battery connector on the **ROW #1 PCB**.

From there, place the battery over top of the closest crossmember and fasten two zipties around it (*Figure 7.2*). Make sure to tighten up the zipties quite snug so that the battery will stay in place.

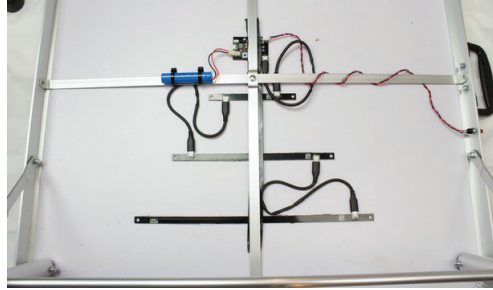The final assembly underneath the table is now completed (*Figure 7.3*). Great work!
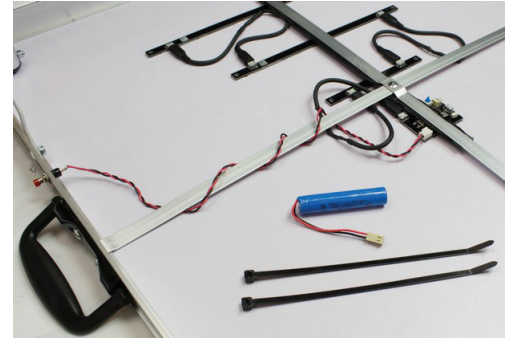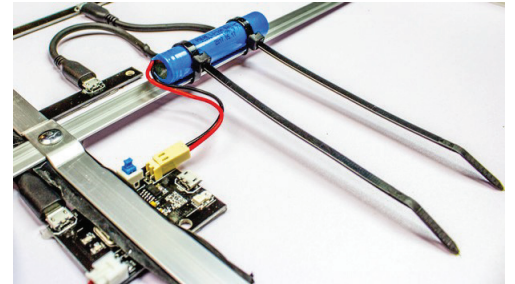

Figure 7.1

Figure 7.3

Figure 7.2

8

The last step is to flip the table over and ensure that all of the LEDs have lined up with their respective holes (*Figure 8.1*). Each LED should be clearly visible from above and not be obstructed by any part of the holes edges that it sits in.

If any of the LEDs are out of placement, you may have to flip the table over and *carefully* detach the problem PCB from the bottom of the table and reorient it (refer to *Step #3*).

If all of the LEDs are now lined up properly, grab the clear sticker sheet and apply a sticker over top of the top-most LED on the pyramid (*Figure 8.2*). Center the sticker as best as you can but keep in mind it doesn't have to be perfect.

Repeat the same process for the remaining LEDs (*Figure 8.3*). If the battery has a charge, feel free to turn the table on at this point (click the blue button on the ROW #1 PCB) and verify that all of the LEDs and connections are working (*Figure 8.4* & *Figure 8.5*).
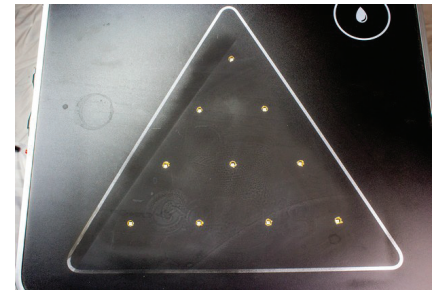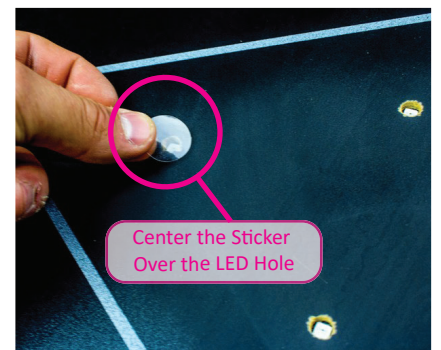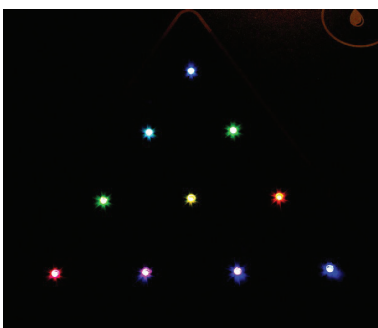

Figure 8.1

Center the Sticker Over the LED Hole
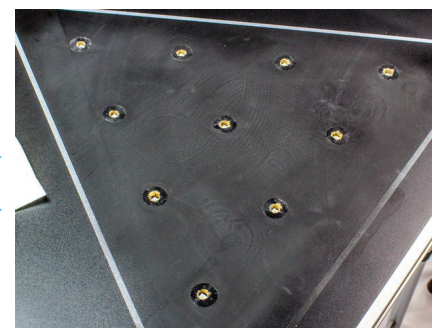*Figure 8.2*

Figure 8.5

Figure 8.4

Figure 8.3

9
In order to charge the battery, connect the charging cable to the charging port on the **ROW #1 PCB** (*Figure 9.1*). It may be easiest to charge it with the table lying on its side.

Next, take the charging block and plug the charging cable into it (*Figure 9.2*).

Once charging, the light will turn red/orange to indicate that it is charging and once charged, it will turn green. A single charge can last for over 12 hours of play time!

When charging the batteries, it is best not to fold the table up with the cables protruding out from the folds as this can kink the cables and damage them (*Figure 9.3*). When charging, always leave a small gap with the fold partially open so that the cables don't get squished or damaged.
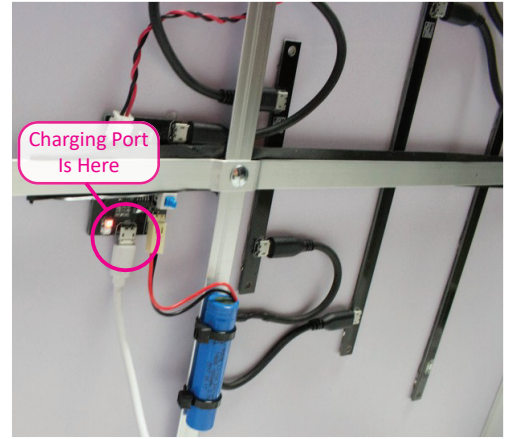
Charging Port Is Here

Figure 9.1

Figure 9.3

Figure 9.2

You have now finished installing your very own RaveTable-Mini DIY Kit. Great work! Check out the "*RaveTable-Mini User Manual*" for operating instructions and helpful hints.

If you have any questions or concerns, feel free to contact us directly at *support@chexal.com*. Thank you for your interest in our products!