PART	NO.	FUNCTION	DIMENTION IN INCHES thickness x width x length
Α	1	bottom cedar board	1" x 14" x 22"
В	2	back cedar board	1" x 12" x 22"
С	3	long back support	3/8" x 3" x 17.5"
D	4	back support	3/8" x 3" x 11.5"
Ε	5	bottom support	3/8" x 3" x 13.5"
F	6	support for legs	3/8" x 3" x 15"
G	7	Leg	3/8" x 3" x 12"
Н	8	small leg	3/8" x 3" x 6"
1	9	external hex	D: 3/8" x M6 x 15mm
J	10	flat screw	#6 x 1/2"
K	11	cusion	1/2" x 18" x 7"

The sitting of the chair is made from cedar board, meanwhile the legs are made from flat bar steel which well be painted black in the process. There will be cusion also added on the chair where one will rest their back for comfort.

Flat Steel Bar

Screw

Internal Threads

Stainless Steel Flat Head

### Place to obtain materials:

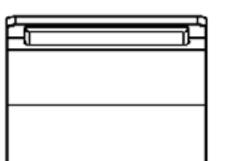
- 1. Boards & Beams LLC (1 in thick x 1 in wide x 10ft tall)
- 2. Newark Ironworks (metal flat bar 3/8" x 3" x 20ft tall)
- 3. Lowe's (internal thread and screw)
- 4. Home Depot (danish oil and sandpaper)

### Needed Tools:

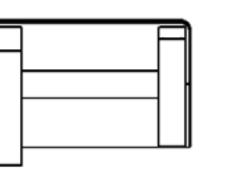
# Needed Materials:

- Chop Saw (for wood and metal)
   Cedar Board
- Table Saw
- Plundge Router
- Orbital/Block Sander
- Sand paper (use 120 to 250)
- Torch kit
- Danish Oil (for finsih)
- Welder
- Drills
- Fasteners
- Makita Biscuit Joiner
- Angle Grinder
- Nylon Brush

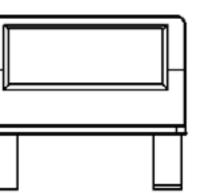




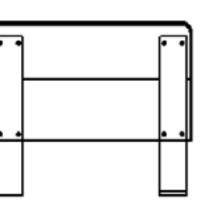
**Bottom View** 



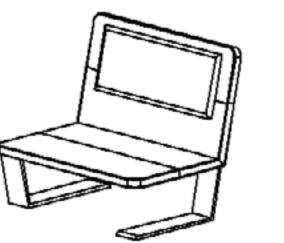
Front View



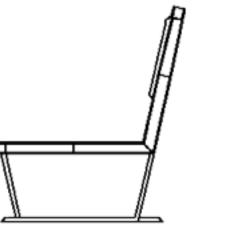
**Back View** 



Isometric View



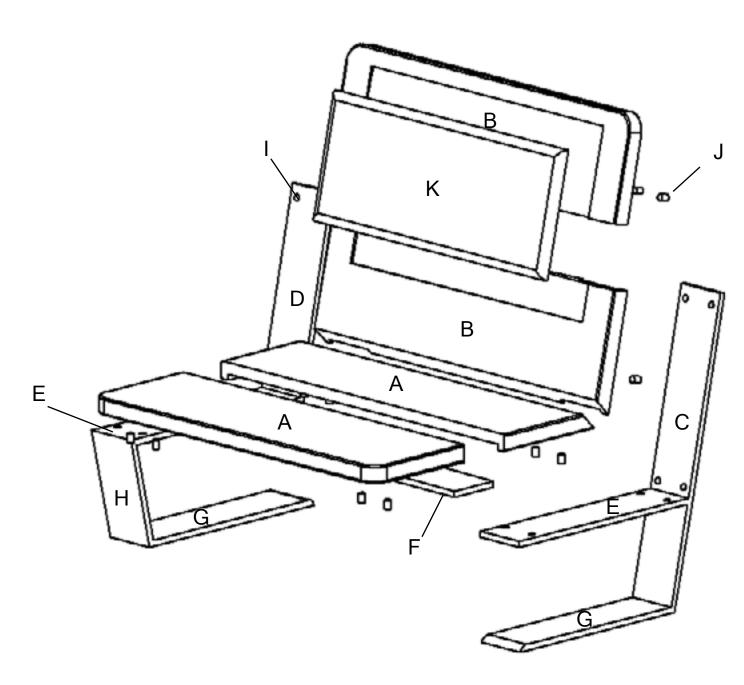
Side View



# List of Material

PART	NO.	FUNCTION	DIMENTION IN INCHES thickness x width x lengt
Α	1	bottom cedar board	1" x 14" x 22"
В	2	back cedar board	1" x 12" x 22"
С	3	long back support	3/8" x 3" x 17.5"
D	4	back support	3/8" x 3" x 11.5"
E	5	bottom support	3/8" x 3" x 13.5"
F	6	support for legs	3/8" x 3" x 15"
G	7	Leg	3/8" x 3" x 12"
Н	8	small leg	3/8" x 3" x 6"
l	9	external hex	D: 3/8" x M6 x 15mm
J	10	flat screw	#6 x 1/2"
K	11	cusion	1/2" x 18" x 7"

- 1. Cut all the cedar boards according to their size then use a biscuit joiner to biscuit join the boards, apply wood glue and wait until it dries.
- 2. Once it dries, sand lightly to remove any excess glue attached to the board. Then milter 51.8 degrees on one side of the board.
- 3. As for the metal frame, use the metal chop saw and cut pieces (C through H) then using drills (for metal), drill 3/8 dimension hole into piece C, D and E (place where the screws are going to be attached to create a connection between the wood and the metal frame). After that place the pieces in order and weld them together.
- 4. Once welding is done, then use an angle grinder to create a smooth finish for the chair frame. Then take the orbital sander to sand the metal until you see silver color, then clean it off with alcohol wipes and let it dry. Lastly, once the metal dries, apply black spray paint (for metal).
- 5. Next, use the router to take of 3/8 in thickness so that metal can rest into it. In addition, drill ½ in deep into the board and then place in an internal thread. After doing that for board (A) and (B), take the torch and burn the wood until the surface turns black. Using nylon brush to brush off the burnt texture on the surface. Do not bruh roughly, but instead brush lightly to smoothen sits.
- 6. Then apply danish oil before assembling them together. Wait 24hrs for the cure and finally assemble the wood and the metal together (also cushion for comfort). Then taking the flat screw, fasten the two materials together.



PART	NO.	FUNCTION	DIMENTION IN INCHES thickness x width x length
Α	1	cedar board	1" x 6" x 47"
В	2	horizontal support	3/8" x 3" x 38"
С	3	vertical support	3/8" x 3" x 28"
D	4	diagonal leg height	3/8" x 3" x 30"
E	5	small leg height	3/8" x 3" x 6"
F	6	bottom leg	3/8" x 3" x 27"
G	7	external hex	D: 3/8" x M6 x 15mm
		flat screw	#6 x 1/2"

The table is made out from cedar wood and the legs are made from flat bar steel which well be painted black in the process

### Place to obtain materials:

- 1. Boards & Beams LLC (1 in thick x 1 in wide x 10ft tall)
- 2. Newark Ironworks (metal flat bar 3/8" x 3" x 20ft tall)
- 3. Lowe's (internal thread and screw)
- 4. Home Depot (danish oil and sandpaper)

### Needed Tools:

### **Needed Materials:**

Flat Steel Bar

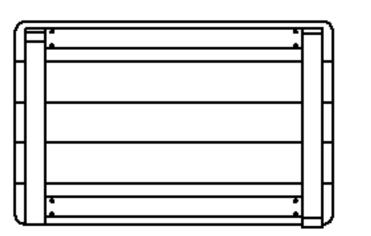
Screw

Internal Threads

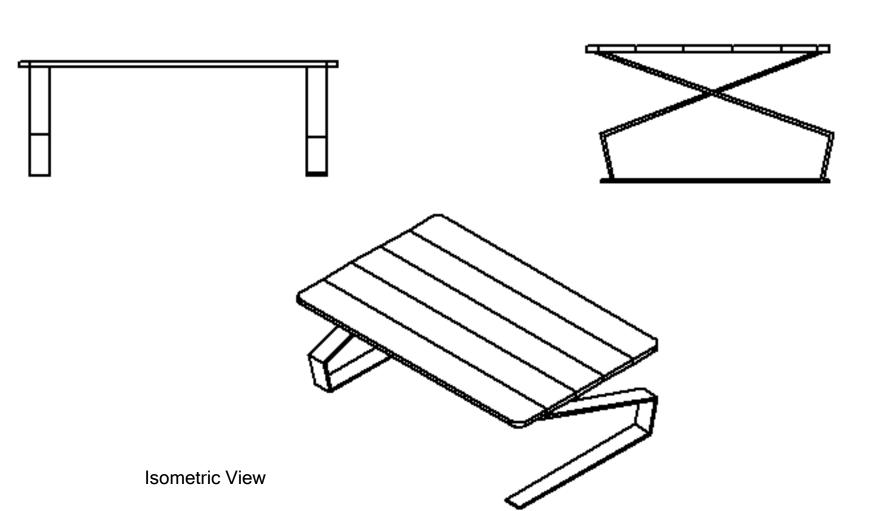
Stainless Steel Flat Head

- Chop Saw (for wood and metal)
   Cedar Board
- Table Saw
- Plundge Router Orbital/Block Sander
- Sand paper (use 120 to 250)
- Torch kit
- Danish Oil (for finsih)
- Welder
- Drills
- Fasteners
- Makita Biscuit Joiner
- Angle Grinder
- Nylon Brush

Top View **Bottom View** 



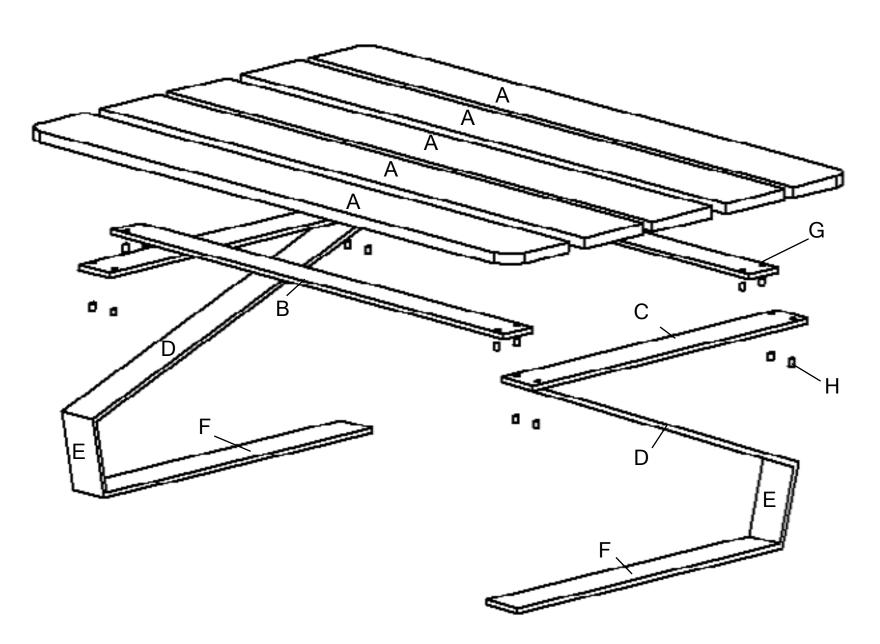
Front View Side View



## **List of Material**

PART	NO.	FUNCTION	DIMENTION IN INCHES thickness x width x length
Α	1	cedar board	1" x 6" x 47"
В	2	horizontal support	3/8" x 3" x 38"
С	3	vertical support	3/8" x 3" x 28"
D	4	diagonal leg height	3/8" x 3" x 30"
Ε	5	small leg height	3/8" x 3" x 6"
F	6	bottom leg	3/8" x 3" x 27"
G	7	external hex	D: 3/8" x M6 x 15mm
Н	8	flat screw	#6 x 1/2"

- 1. Cut all the cedar boards according to their size then use a biscuit joiner to biscuit join the boards, apply wood glue and wait until it dries.
- 2. Once it dries, sand lightly to remove any excess glue attached to the
- 3. Use the metal chop saw and cut metal into its according size (B through E) then using drills (for metal), drill 3/8 dimension hole into piece (C) and (B) (piece where the screws are going to be attached to create a connection between the wood and the metal frame). After that place the pieces in order and weld them together.
- 4. Once welding is done, then use an angle grinder to create a smooth finish for the chair frame. Then take the orbital sander to sand the metal until you see silver color, then clean it off with alcohol wipes and let it dry. Lastly, once the metal dries, apply black spray paint (for metal).
- 5. Next, use the router to take of 3/8 in thickness so that metal can rest into it. In addition, drill ½ in deep into the board and then place in an internal thread. After doing that for board (A), take the torch and burn the wood until the surface turns black. Using nylon brush to brush off the burnt texture on the surface. Do not bruh roughly, but instead brush lightly to keep the burnt amber color.
- 6. Then apply danish oil before assembling them together. Wait 24hrs for the cure and finally assemble the wood and the metal together. Then taking the flat screw, fasten the two materials together.



PART	NO.	FUNCTION	DIMENTION IN INCHES thickness x width x length
Α	1	cedar board	1" x 5" x 10"
В	2	leg	3/8" x 3" x 12"
С	3	case size	2.2" x 2.2" x 0.65"
D	4	minute hand	3/20" x 1/4" x 5 ½"
Ε	5	hour hand	3/20" x 1/4" x 4 7/20"
F	6	brass washer	1/50" x 3/20" x 3/5"
G	7	brass nut	3/20" x .13" x 1/2"
Н	8	cap	D: .17" x .10"
1	9	internal hex	D: 3/8" x M6 x 15mm
		flat screw	#6 x 1/2"

The clock will also be made out from cedar wood and the legs are made from flat bar steel which well be painted black in the process

### Place to obtain materials:

- 1. Boards & Beams LLC (1 in thick x 1 in wide x 10ft tall)
- 2. Newark Ironworks (metal flat bar 3/8" x 3" x 20ft tall)
- 3. Lowe's (internal thread and screw)
- 4. Home Depot (danish oil and sandpaper)

### Needed Tools:

- Chop Saw (for wood and metal)
   Cedar Board
- Table Saw
- Plundge Router
- Orbital/Block Sander

Danish Oil (for finsih)

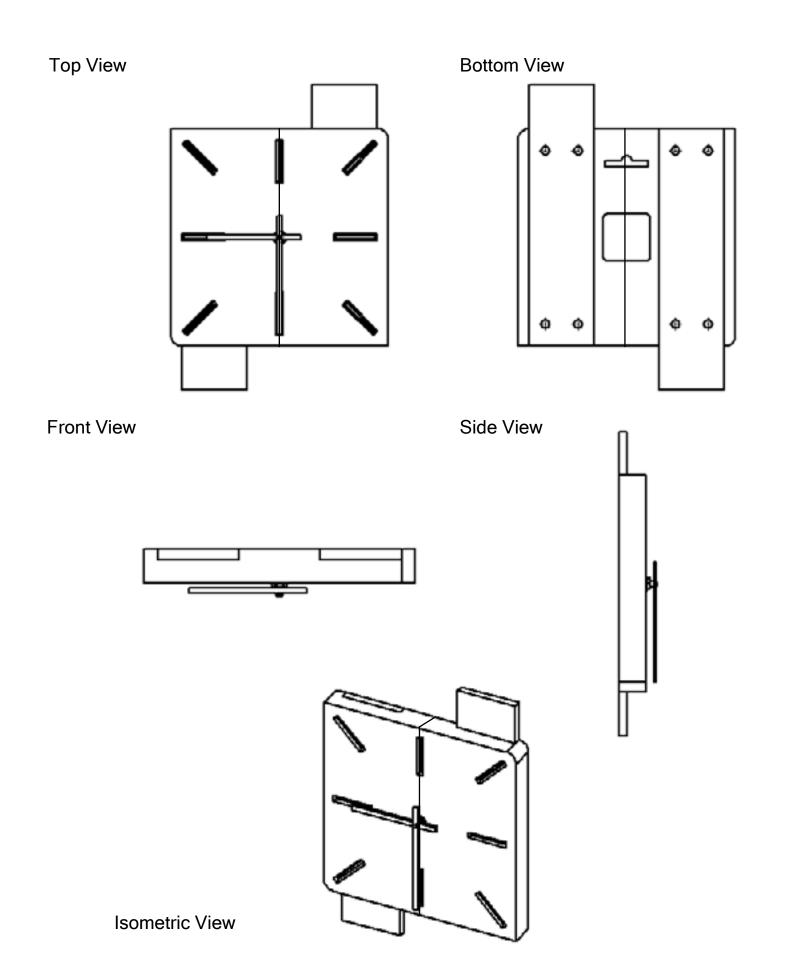
- Sand paper (use 120 to 250)
- Torch kit
- Welder

Fasteners

- Drills
- Makita Biscuit Joiner
- Angle Grinder
- Nylon Brush
- CNC

# **Needed Materials:**

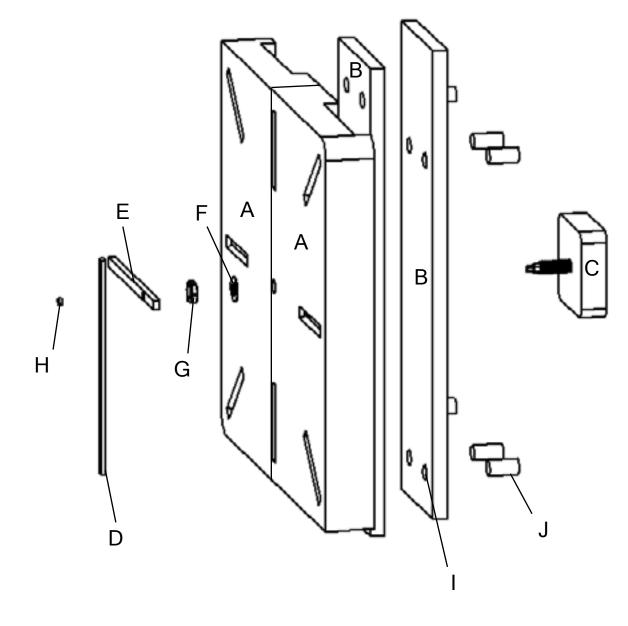
- Flat Steel Bar
- Internal Threads
- Stainless Steel Flat Head
- Clock Movement Mechanism Repair parts replacement kit



## **List of Material**

PART	NO.	FUNCTION	DIMENTION IN INCHES thickness x width x length
Α	1	cedar board	1" x 5" x 10"
В	2	leg	3/8" x 3" x 12"
С	3	case size	2.2" x 2.2" x 0.65"
D	4	minute hand	3/20" x 1/4" x 5 ½"
Е	5	hour hand	3/20" x 1/4" x 4 7/20"
F	6	brass washer	1/50" x 3/20" x 3/5"
G	7	brass nut	3/20" x .13" x 1/2"
Н	8	cap	D: .17" x .10"
I	9	internal hex	D: 3/8" x M6 x 15mm
J	10	flat screw	#6 x 1/2"

- 1. Cut two of the cedar boards according to their size (A) then use a biscuit joiner to biscuit join the boards, apply wood glue and wait until it
- 2. Once it dries, sand lightly to remove any excess glue attached to the
- 3. Use the metal chop saw and cut 2 pieces of metal into its according size (B), then using drills (for metal), drill 3/8 dimension hole into 2 pieces (B) (piece where the screws are going to be attached to create a connection between the wood and the metal frame).
- 4. Use the orbital sander to sand the metal until you see silver color, then clean it off with alcohol wipes and let it dry. Once the metal dries, apply black spray paint (for metal).
- 5. Next, use the router to take of 3/8 in thickness so that metal can rest into it. In addition, drill ½ in deep into the board and then place in an internal thread. Then place it on CNC machine and create a slight depth to mark the line representing time and also create a .65in depth to place case (clock mechanism) that will rest into it. After doing that, take two glued board (A), using the torch, burn the wood until the surface turns black. Using nylon brush to brush off the burnt texture on the surface. Do not bruh roughly, but instead brush lightly to keep the burnt
- 6. Then apply danish oil before assembling them together. Wait 24hrs for the cure and finally assemble the wood and the metal together. Then taking the flat screw, fasten the two materials together.



PART	NO.	FUNCTION	DIMENTION IN INCHES thickness x width x lengt
Α	1	top and bottom	1" x 8" x 50"
В	2	back	1/4" x 5" x 50"
С	3	side	1" x 8" x 23"
D	4	door	.22" x 25" x 12.38"
Ε	5	angled leg	3/8" x 3" x 10"
F	6	top leg	3/8" x 3" x 15.75"
G	7	bottom leg	3/8" x 3" x 13.7"
Н	8	horizontal support	3/8" x 3" x 42"
I	9	internal hex	D: 3/8" x M6 x 15mm
		flat screw	#6 x 1/2"

The display case well also be made out from cedar wood and the legs are made from flat bar steel which well be painted black in the process

### Place to obtain materials:

- 1. Boards & Beams LLC (1 in thick x 1 in wide x 10ft tall)
- 2. Newark Ironworks (metal flat bar 3/8" x 3" x 20ft tall)
- 3. Lowe's (internal thread and screw)
- 4. Home Depot (danish oil and sandpaper)

### Needed Tools:

### Needed Materials:

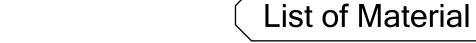
Flat Steel Bar

Screw

Internal Threads

Stainless Steel Flat Head

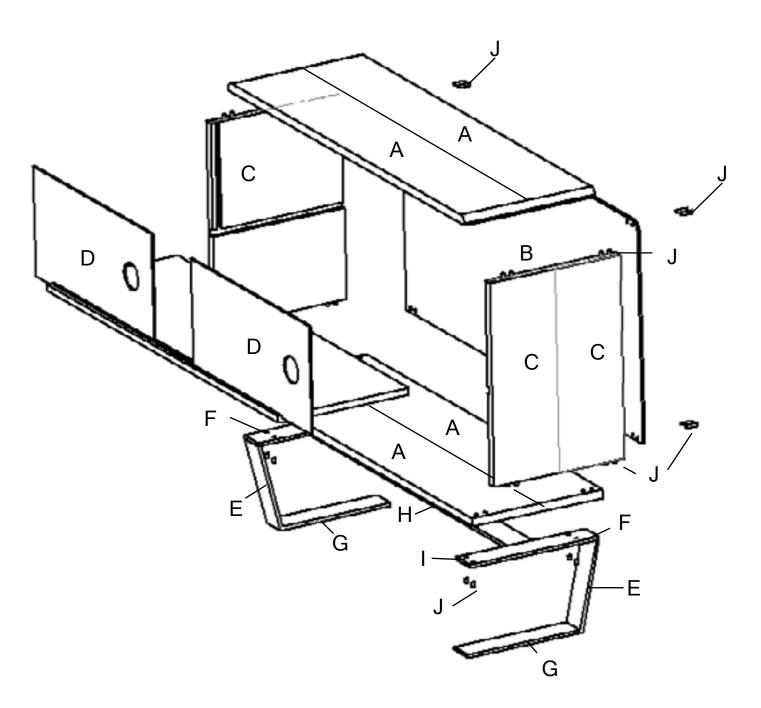
- Chop Saw (for wood and metal)
   Cedar Board
- Table Saw
- Plundge Router
- Orbital/Block Sander
- Sand paper (use 120 to 250)
- Torch kit
- Danish Oil (for finsih)
- Welder
- Drills
- Fasteners
- Makita Biscuit Joiner
- Angle Grinder
- Nylon Brush
- Laser Cut



Top View		В	Bottom View	
Front View		В	Back View	
	0	0		
Isometric View	0	0	Side View	

NO.	FUNCTION	DIMENTION IN INCHES thickness x width x length
1	top and bottom	1" x 8" x 50"
2	back	1/4" x 5" x 50"
3	side	1" x 8" x 23"
4	door	.22" x 25" x 12.38"
5	angled leg	3/8" x 3" x 10"
6	top leg	3/8" x 3" x 15.75"
7	bottom leg	3/8" x 3" x 13.7"
8	horizontal support	3/8" x 3" x 42"
9	internal hex	D: 3/8" x M6 x 15mm
10	flat screw	#6 x 1/2"
	1 2 3 4 5 6 7 8 9	<ul> <li>top and bottom</li> <li>back</li> <li>side</li> <li>door</li> <li>angled leg</li> <li>top leg</li> <li>bottom leg</li> <li>horizontal support</li> <li>internal hex</li> </ul>

- 1. Cut two of the cedar boards according to their size (A, B, and C), then use a biscuit joiner to biscuit join the boards, apply wood glue and wait until it dries. While waiting for it, using planer to make the thickness to 1/4in (D), and putting it into laser cut to make a circle handle.
- Once it dries, sand lightly to remove any excess glue attached to the board.
- 3. Use the metal chop saw and cut pieces of metal into its according size (E, F, G,and H), then using drills (for metal), drill 3/8 dimension hole into 2 pieces (B) (piece where the screws are going to be attached to create a connection between the wood and the metal frame).
- Use the orbital sander to sand the metal until you see silver color, then clean it off with alcohol wipes and let it dry. Once the metal dries, apply black spray paint (for metal).
- 5. Next, use the router to take of 3/8 in thickness so that metal can rest into it. In addition, drill ½ in deep into the board and then place in an internal thread. After doing that, take the glues boards (A, B, and C) and the door (D), using the torch, burn the wood until the surface turns black. Using nylon brush to brush off the burnt texture on the surface. Do not bruh roughly, but instead brush lightly to keep the burnt amber color.
- 6. Then apply danish oil before assembling them together. Wait 24hrs for the cure and finally assemble the wood and the metal together. Then taking the flat screw, fasten the two materials together.



PART	NO.	FUNCTION	DIMENTION IN INCHES thickness x width x length
Α	1	top	1/10" x 10" x 30"
В	2	bottom	1" x 10" x 30"
С	3	back and front	1" x 4" x 30"
D	4	side	1/10" x 10" x 4"
E	5	rectangle wood	3/4" x 3/4" x 3.9"
F	6	angled leg	3/8" x 3" x 4"
G	7	top leg	3/8" x 3" x 29"
Н	8	bottom leg	3/8" x 3" x 29"
1	9	battery	1/2" x 1.4" x 2"
J	10	led strip	0.12" x .47" x 28"
K	11	internal hex	D: 3/8" x M6 x 15mm
L	12	flat screw	#6 x 1/2"

The light will be made out from cedar wood and the legs are made from flat bar steel which well be painted black in the process. The light will have additional material which is shouji paper that will cover the light and gives the relaxing dim light effect. It is also be battery based, to make the light cordless.

**Needed Materials:** 

Flat Steel Bar

Screw

144 LED strip

4.5V battery (3)

Shouji Paper

Internal Threads

Stainless Steel Flat Head

Battery Holder Case

### Place to obtain materials:

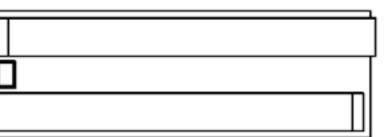
- 1. Boards & Beams LLC (1 in thick x 1 in wide x 10ft tall)
- 2. Newark Ironworks (metal flat bar 3/8" x 3" x 20ft tall)
- 3. Lowe's (internal thread and screw)
- 4. Home Depot (danish oil and sandpaper)

### Needed Tools:

- Chop Saw (for wood and metal)
   Cedar Board
- Table Saw
- Plundge Router
- Orbital/Block Sander
- Sand paper (use 120 to 250)
- Torch kit
- Danish Oil (for finsih)
- Welder
- Drills
- Fasteners
- Makita Biscuit Joiner
- Angle Grinder
- Nylon Brush
- CNC

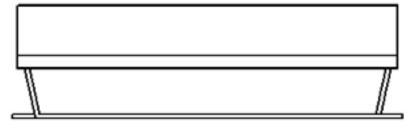
**Bottom View** Top View

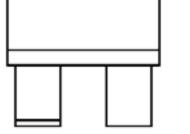














### Isometric View

# **List of Material**

PART	NO.	FUNCTION	DIMENTION IN INCHES thickness x width x length	
Α	1	top	1/10" x 10" x 30"	
В	2	bottom	1" x 10" x 30"	
С	3	back and front	1" x 4" x 30"	
D	4	side	1/10" x 10" x 4"	
Ε	5	rectangle wood	3/4" x 3/4" x 3.9"	
F	6	angled leg	3/8" x	
G	7	top leg	3/8"	
Н	8	bottom leg	3/8"	
	9	battery	1/2" x 1.4" x 2"	
J	10	led strip	0.12" x .47" x 28"	
K	11	internal hex	D: 3/8" x M6 x 15mm	
L	12	flat screw	#6 x 1/2"	
Instructions				

# 111311 45110113

- 1. With one 10in wide cedar board (B), drill a 3/8in hole, do the same for all four (E) pieces, and using 1in dowels to connect to the side. Which then will be wrapped around with shouji paper.
- 2. Use the metal chop saw and cut pieces of metal into its according size (F, G, and H), then using drills (for metal), drill 3/8 dimension hole into 2 pieces (B) (piece where the screws are going to be attached to create a connection between the wood and the metal frame).
- 3. Use the orbital sander to sand the metal until you see silver color, then clean it off with alcohol wipes and let it dry. Once the metal dries, apply black spray paint (for metal).
- 4. Next, use the router to take of 3/8 in thickness so that metal can rest into it. In addition, drill ½ in deep into the board and then place in an internal thread. Then place router on the cedar board (B) to create a depth where the led strip will be placed. Similar to the, place the same board on CNC to create a ½ in deep cut, where the battery holder will be placed. Also drill tiny hole on the battery holder cut where the wire is attach to the two led strips. After that, take board (B) and using the torch, burn the wood until the surface turns black. Using nylon brush to brush off the burnt texture on the surface. Do not bruh roughly, but instead brush lightly to keep the burnt amber color.
- 5. Then apply danish oil before assembling them together. Wait 24hrs for the cure and finally assemble the wood and the metal together. Then taking the flat screw, fasten the two materials together.

