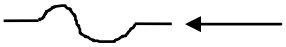
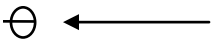
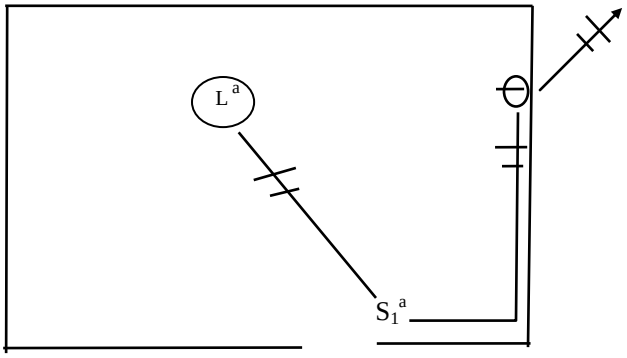
Name: _____ Seat # _____

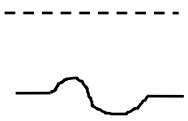
SKILL COMPETENCY #1

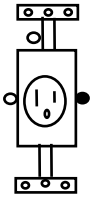
Using the component layouts shown, draw the proper wires according to the schematic and wiring diagrams supplied. Use a solid line (——) to indicate the black wire and a dashed line (- - - ·) to indicate the white wire.

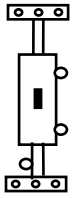

Hot wire

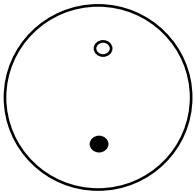

Single receptacle







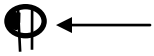


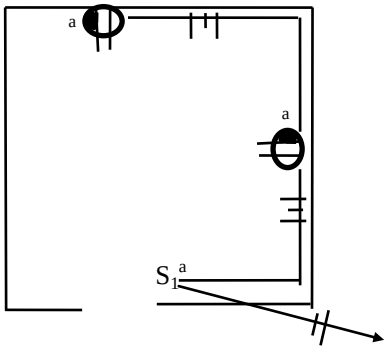


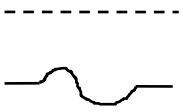
Name: _____ Seat # _____

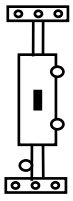
SKILL COMPETENCY #2

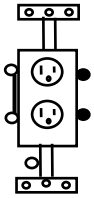
Using the component layouts shown, draw the proper wires according to the schematic and wiring diagrams supplied. Use a solid line (——) to indicate the black wire, a dashed line (- - - ·) to indicate the white wire, a crosshatched line (+++++) to indicate the red wire.

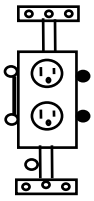
 This is a split receptacle. Half controlled by the switch and the other half hot at all times







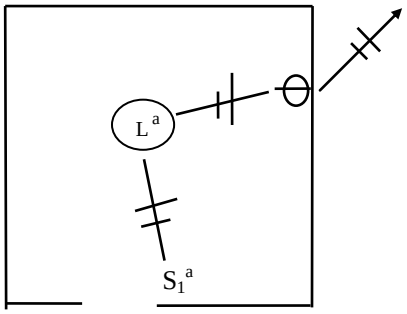


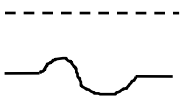


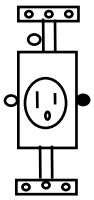
Name: _____ Seat # _____

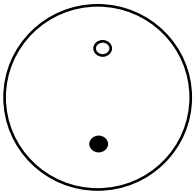
SKILL COMPETENCY #3

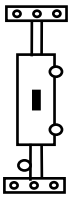
Using the component layouts shown, draw the proper wires according to the schematic and wiring diagrams supplied. Use a solid line (——) to indicate the black wire and a dashed line (- - - ·) to indicate the white wire.







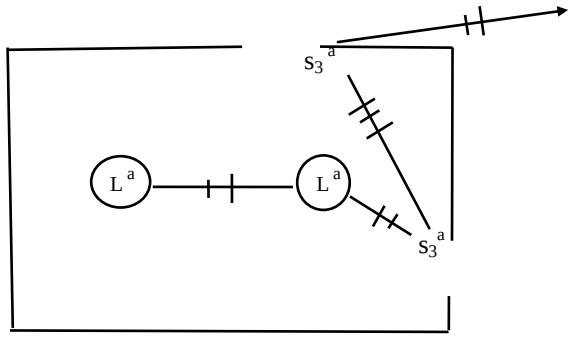


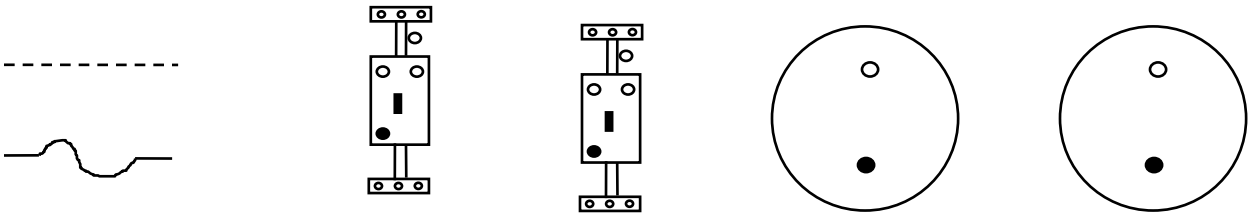


Name: _____ Seat # _____

SKILL COMPETENCY #4

Using the component layouts shown, draw the proper wires according to the schematic and wiring diagrams supplied. Use a solid line (——) to indicate the black wire, a dashed line (- - -) to indicate the white wire, a crosshatched line (+++++) to indicate the red.

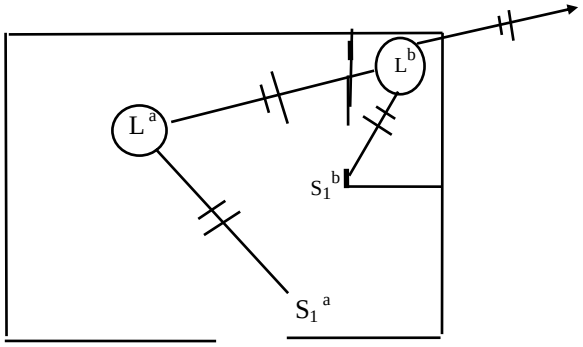


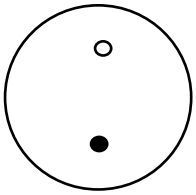


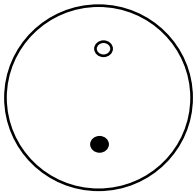
Name: _____ Seat # _____

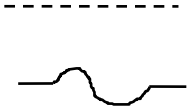
SKILL COMPETENCY #5

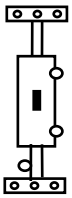
Using the component layouts shown, draw the proper wires according to the schematic and wiring diagrams supplied. Use a solid line (——) to indicate the black wire and a dashed line (- - -) to indicate the white wire.

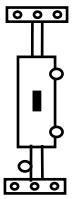








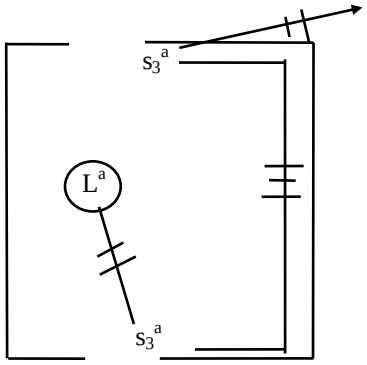


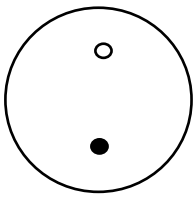


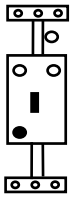
Name: _____ Seat # _____

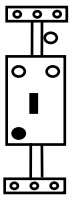
SKILL COMPETENCY #6

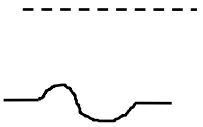
Using the component layouts shown, draw the proper wires according to the schematic and wiring diagrams supplied. Use a solid line (——) to indicate the black wire, a dashed line (- - - ·) to indicate the white wire, a crosshatched line (+++++) to indicate the red wire.









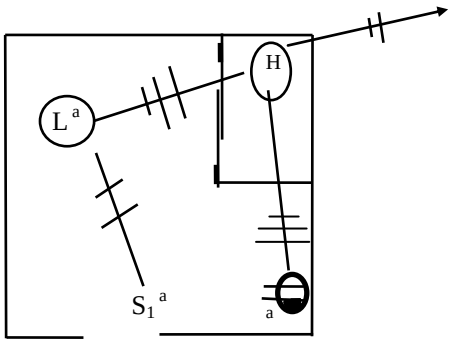


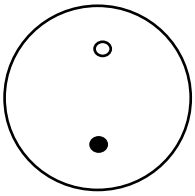
Name: _____ Seat # _____

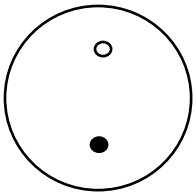
SKILL COMPETENCY #7

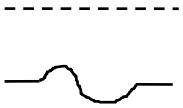
Using the component layouts shown, draw the proper wires according to the schematic and wiring diagrams supplied. Use a solid line (——) to indicate the black wire, a dashed line (- - - ·) to indicate the white wire, a crosshatched line (+++++) to indicate the red wire.

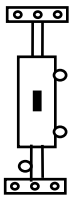
(H) ◄—— Hot at all times

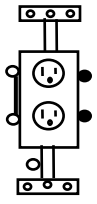








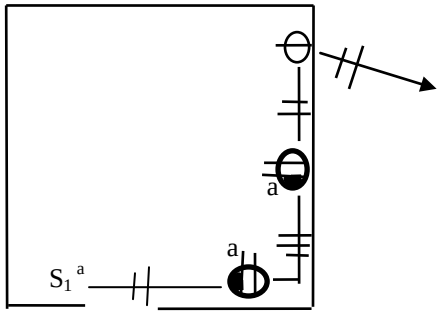


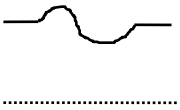


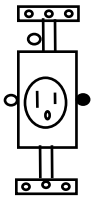
Name: _____ Seat # _____

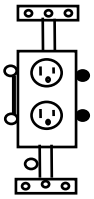
SKILL COMPETENCY #8

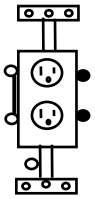
Using the component layouts shown, draw the proper wires according to the schematic and wiring diagrams supplied. Use a solid line (——) to indicate the black wire, a dashed line (- - - -) to indicate the white wire, a crosshatched line (+++++) to indicate the red wire

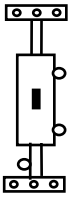










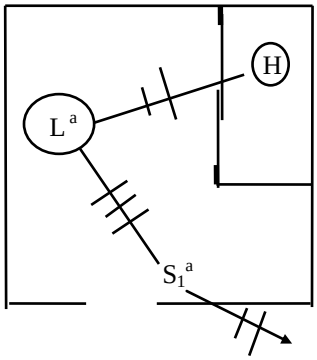


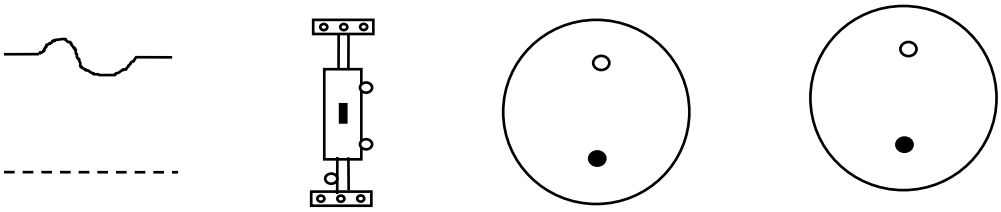
Name: _____ Seat # _____

SKILL COMPETENCY #9

Using the component layouts shown, draw the proper wires according to the schematic and wiring diagrams supplied. Use a solid line (——) to indicate the black wire, a dashed line (- - -) to indicate the white wire, a crosshatched line (+++++) to indicate the red wire.

(H) ⟵ Hot at all times

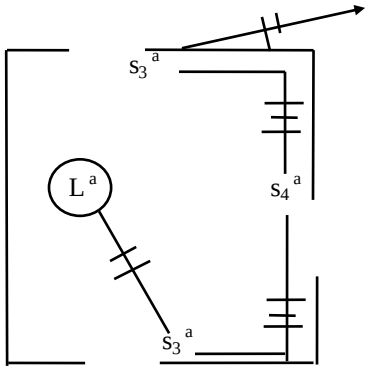


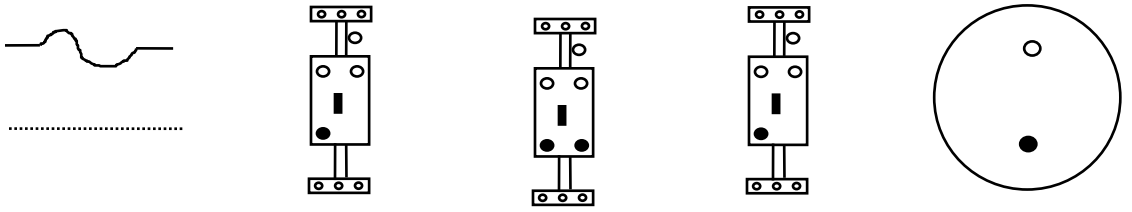


Name: _____ Seat # _____

SKILL COMPETENCY #10

Using the component layouts shown, draw the proper wires according to the schematic and wiring diagrams supplied. Use a solid line (——) to indicate the black wire, a dashed line (- - -) to indicate the white wire, a crosshatched line (+++++) to indicate the red wire



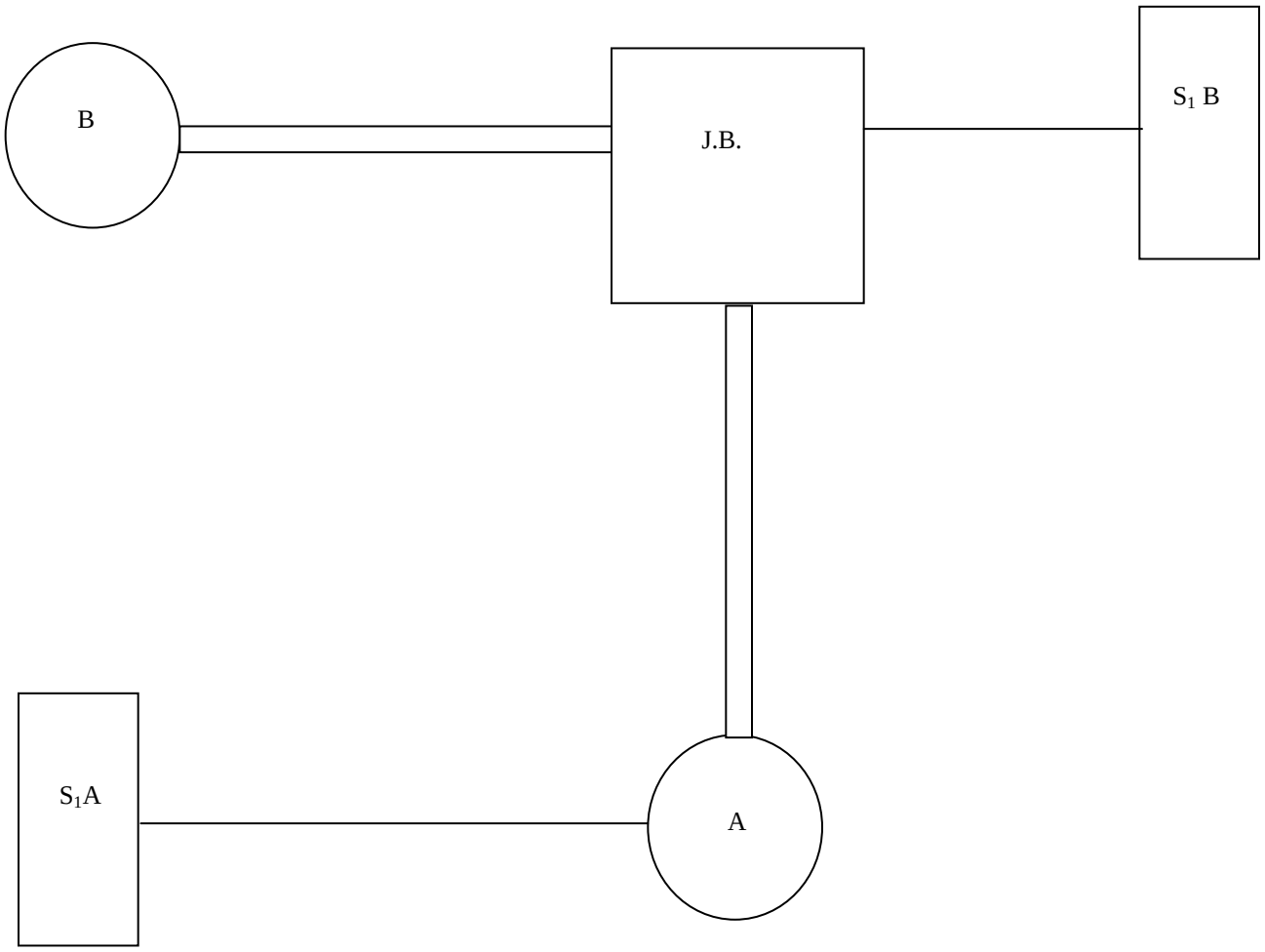


Name: _____ Seat # _____

Two lights controlled independently by two S.P. switches.
Feed at light A

Romex

E.M.T.

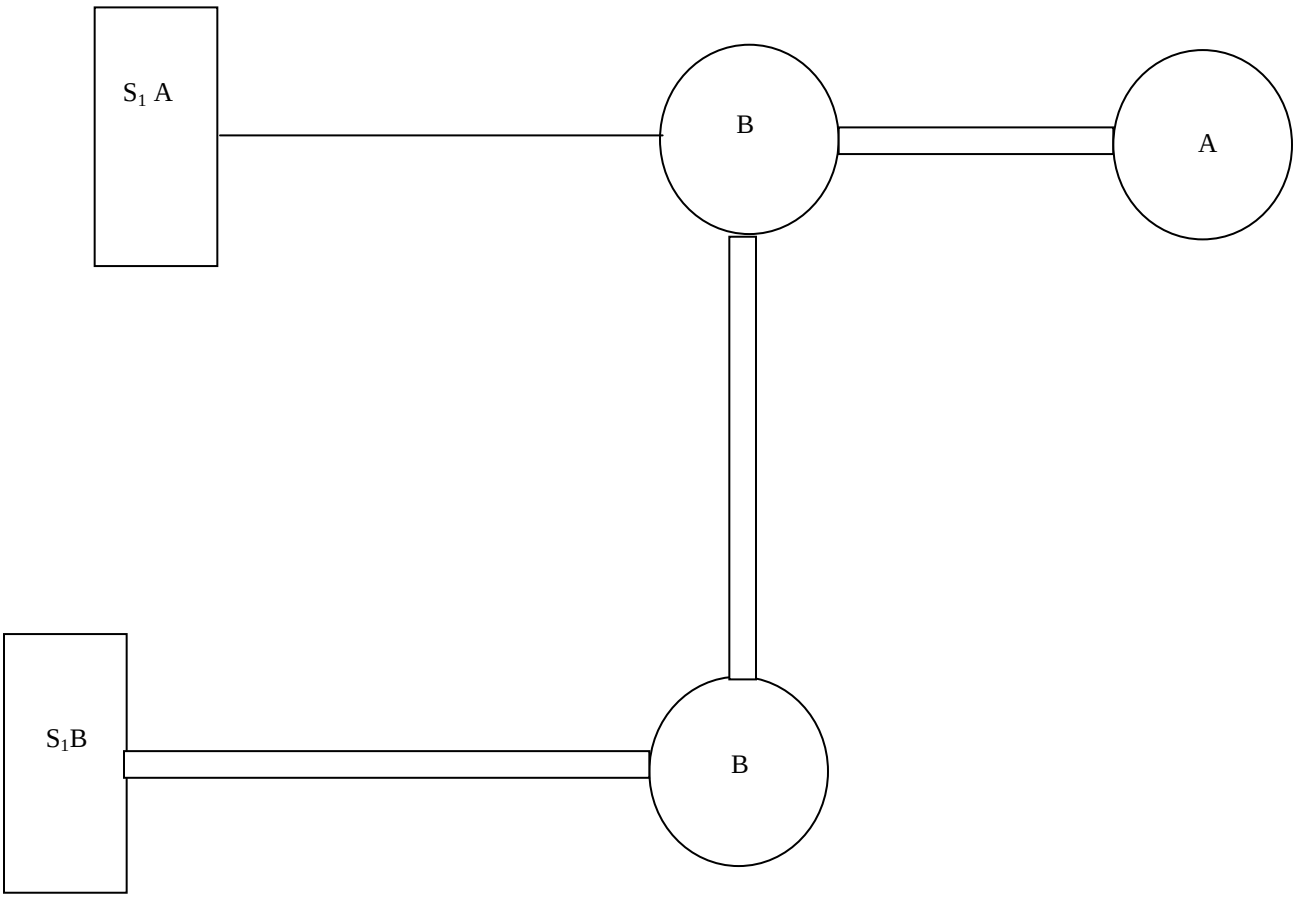


Name: _____ Seat # _____

One switch controls two lights and the other switch controls the other light.
Feed at switch A

Romex

E.M.T.

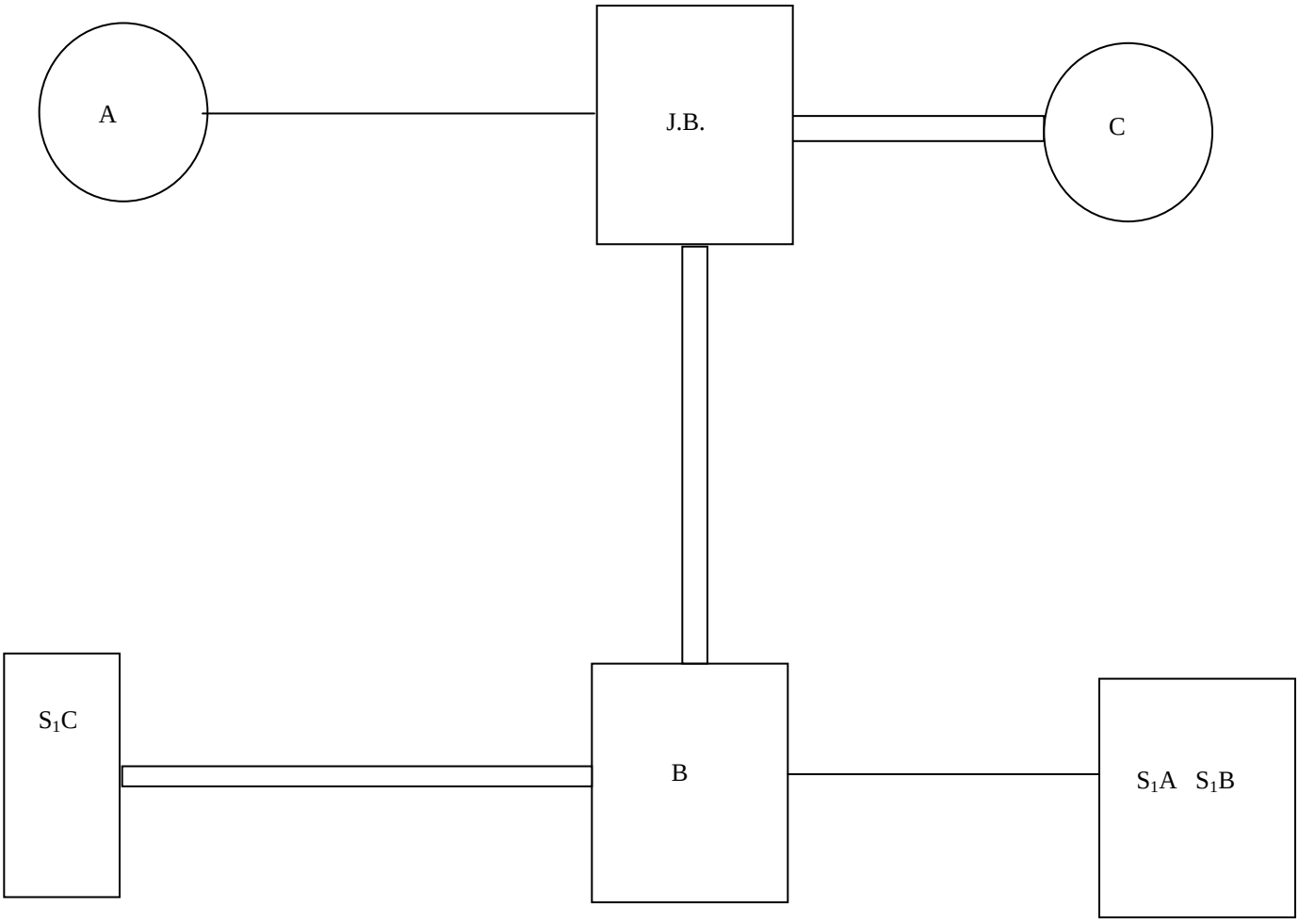


Name: _____ Seat # _____

Three lights controlled independently by three S.P. switches
Feed at light B

Romex

E.M.T.

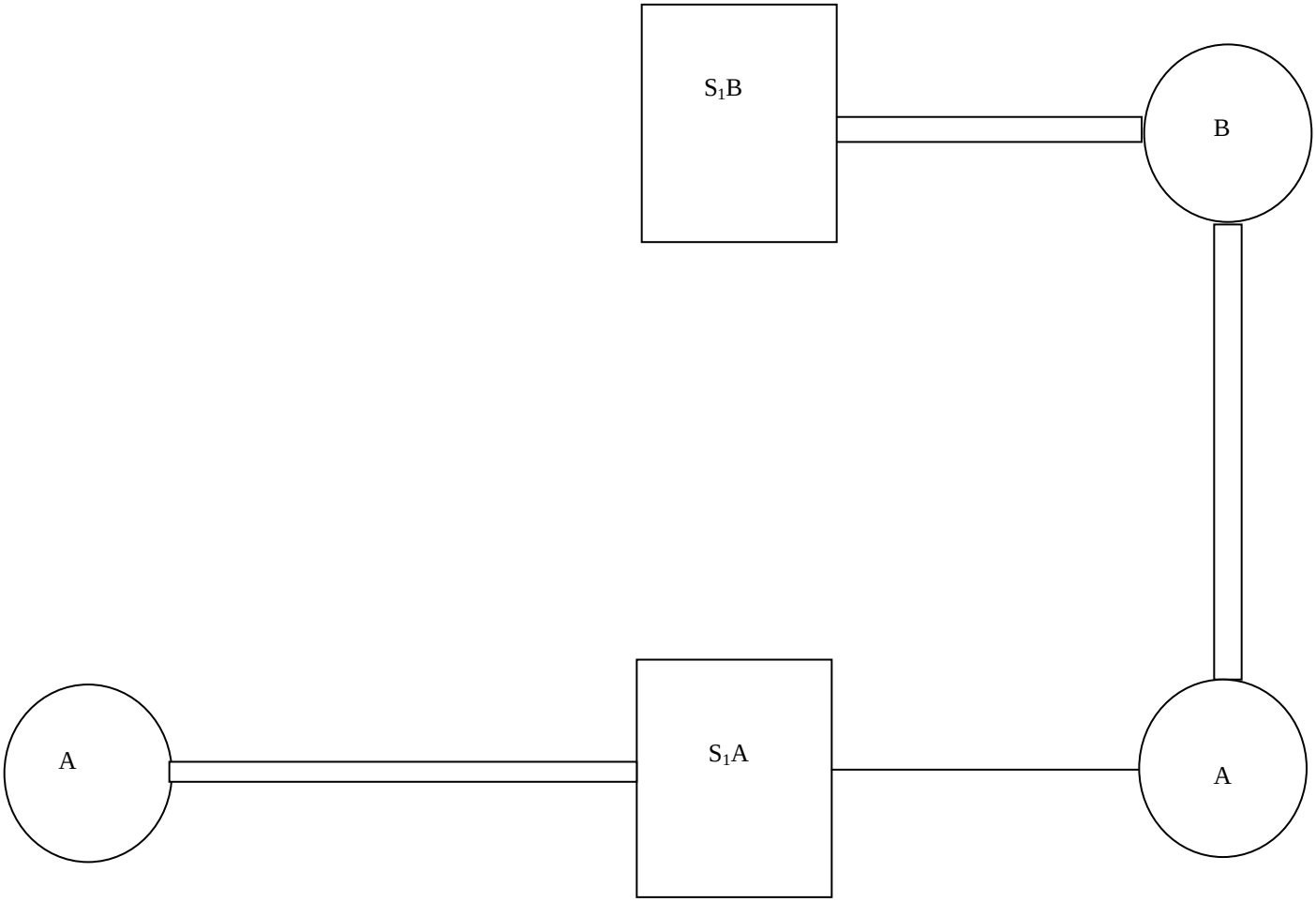


Name: _____ Seat # _____

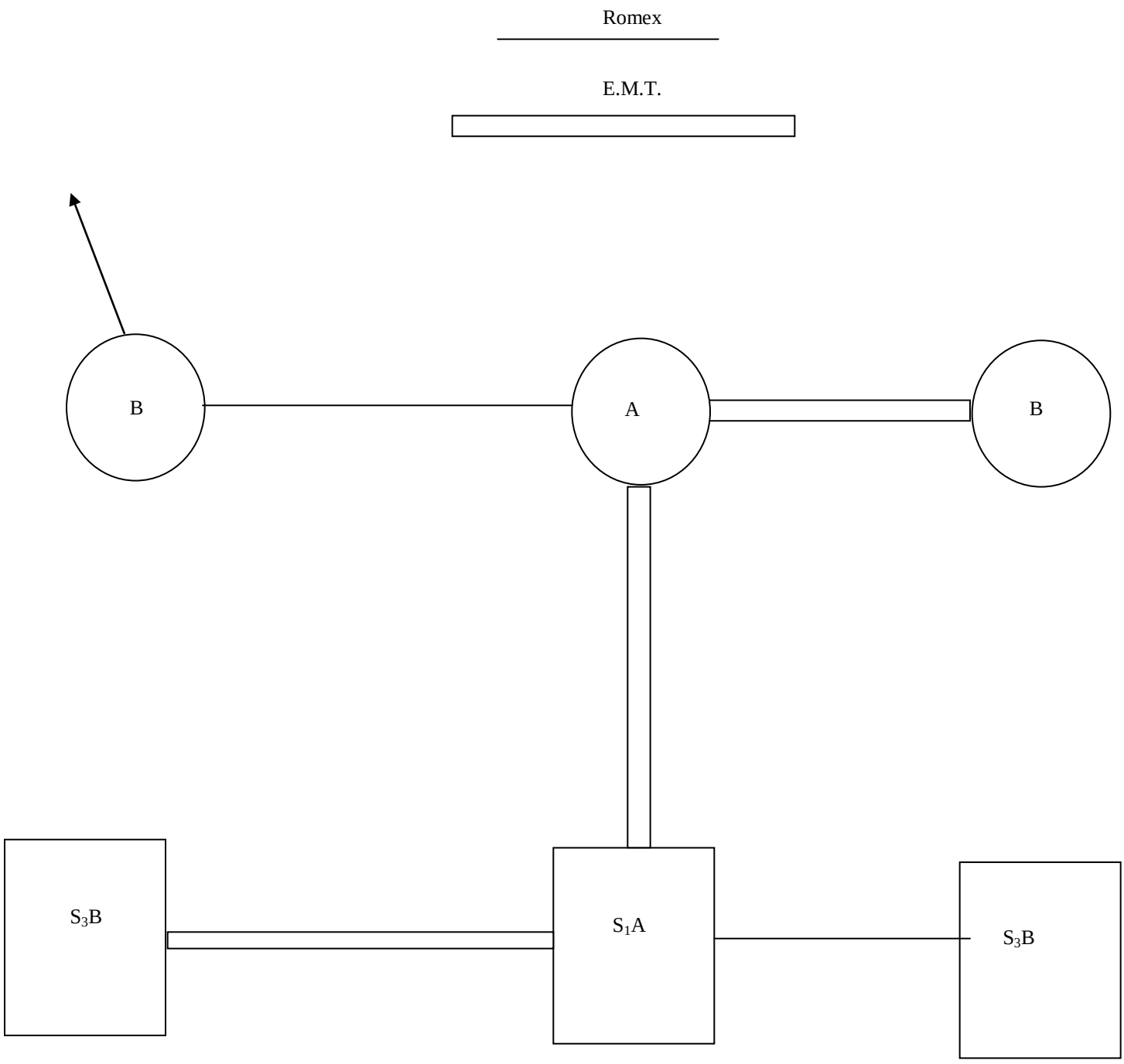
One switch controls two lights and the other switch controls the third light
Feed at light B

Romex

E.M.T

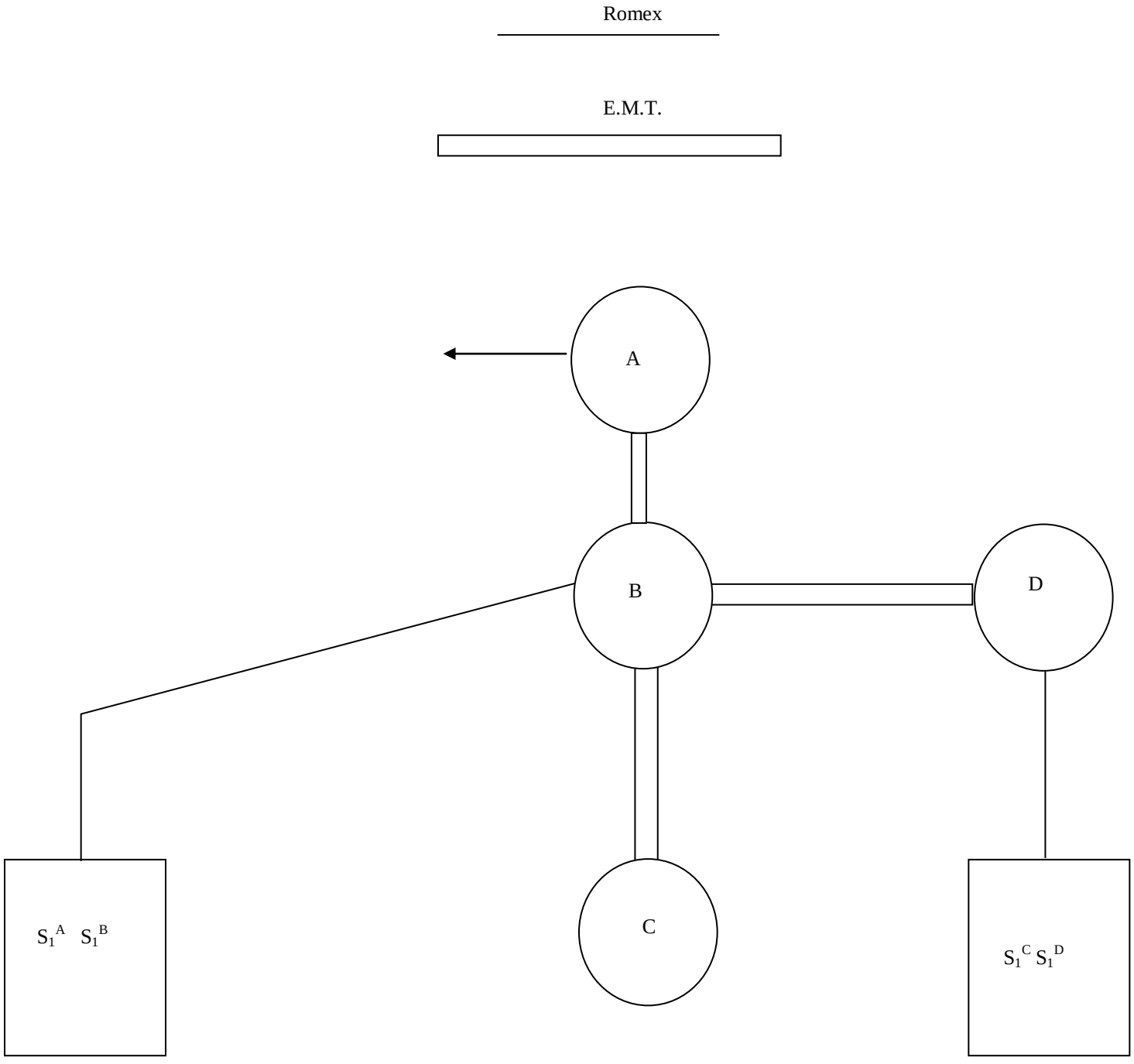


Name: _____ Seat # _____



Name: _____ Seat # _____

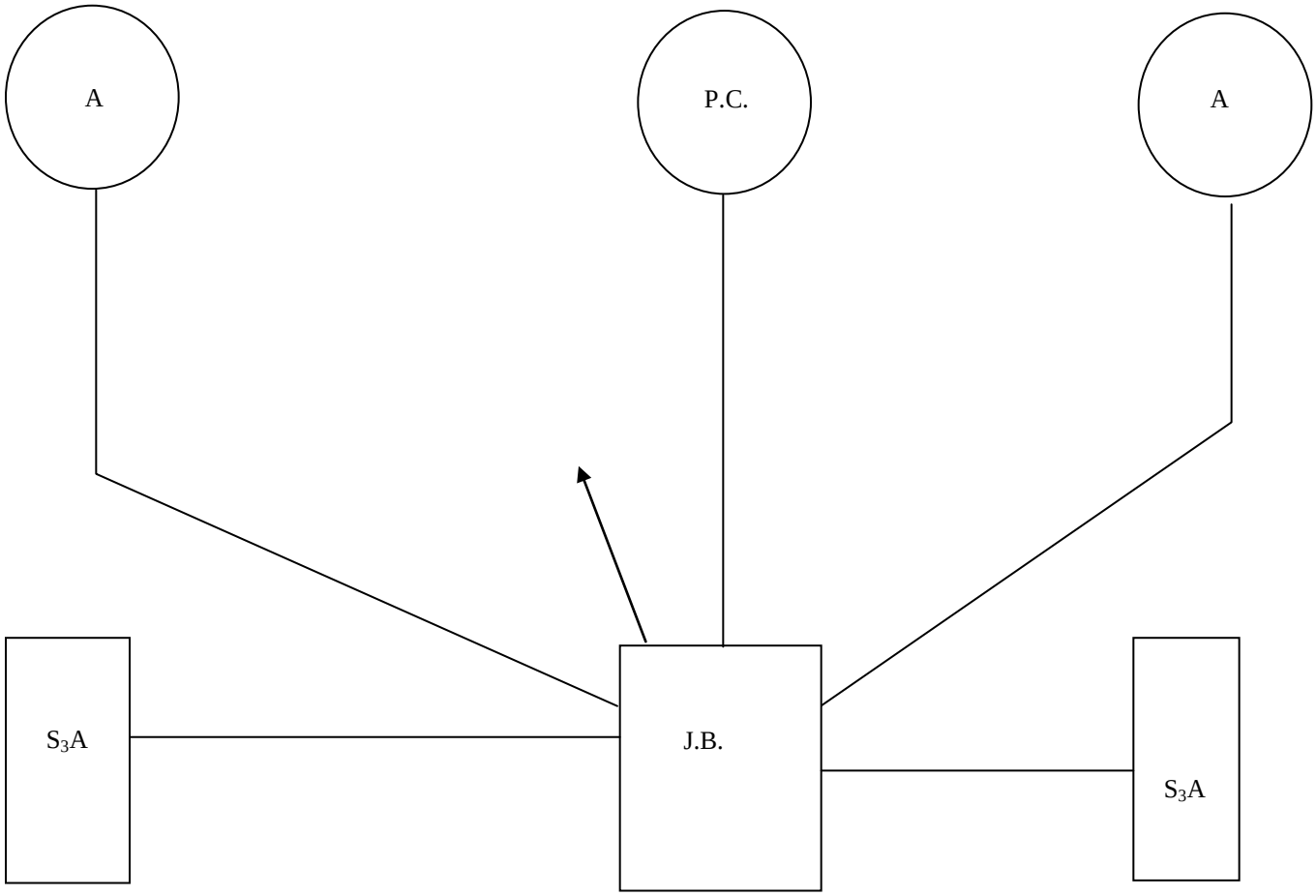
1. Use a board and fasten the boxes to the board using 1 - ½ inch screw in each box.
2. Ground all locations for surface mounting.



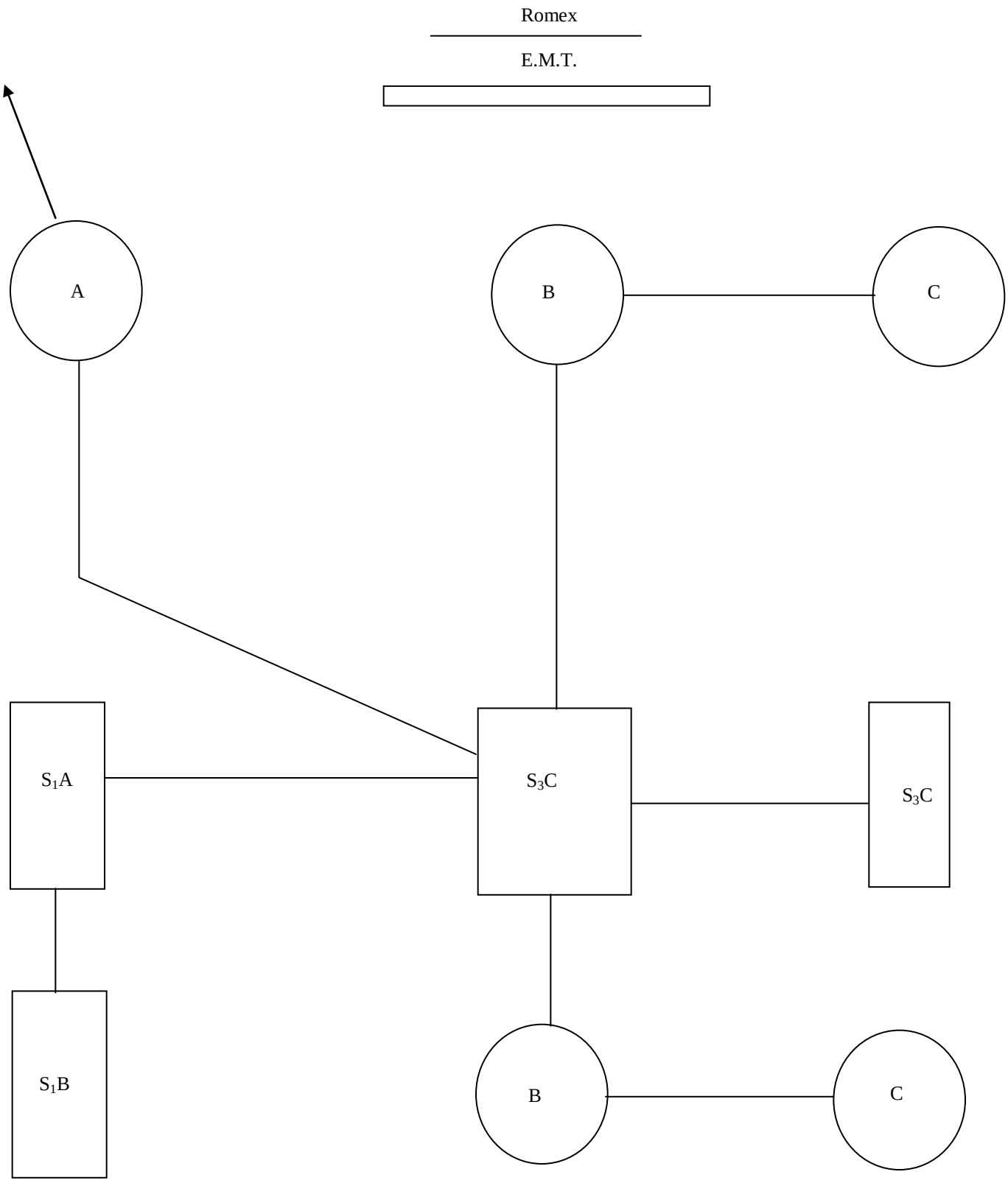
Name: _____ Seat # _____

Romex

E.M.T.



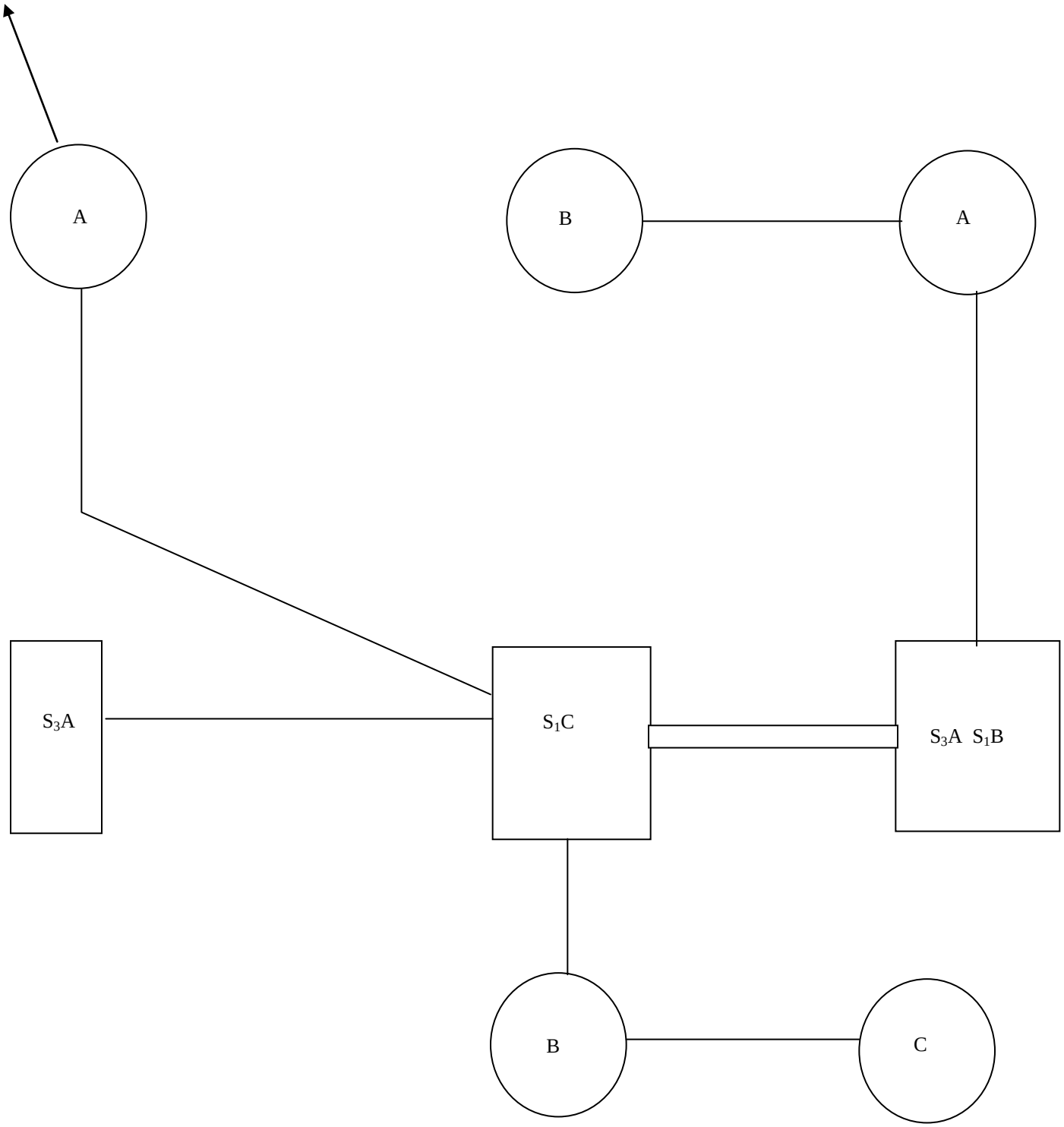
Name: _____ Seat # _____



Name: _____ Seat # _____

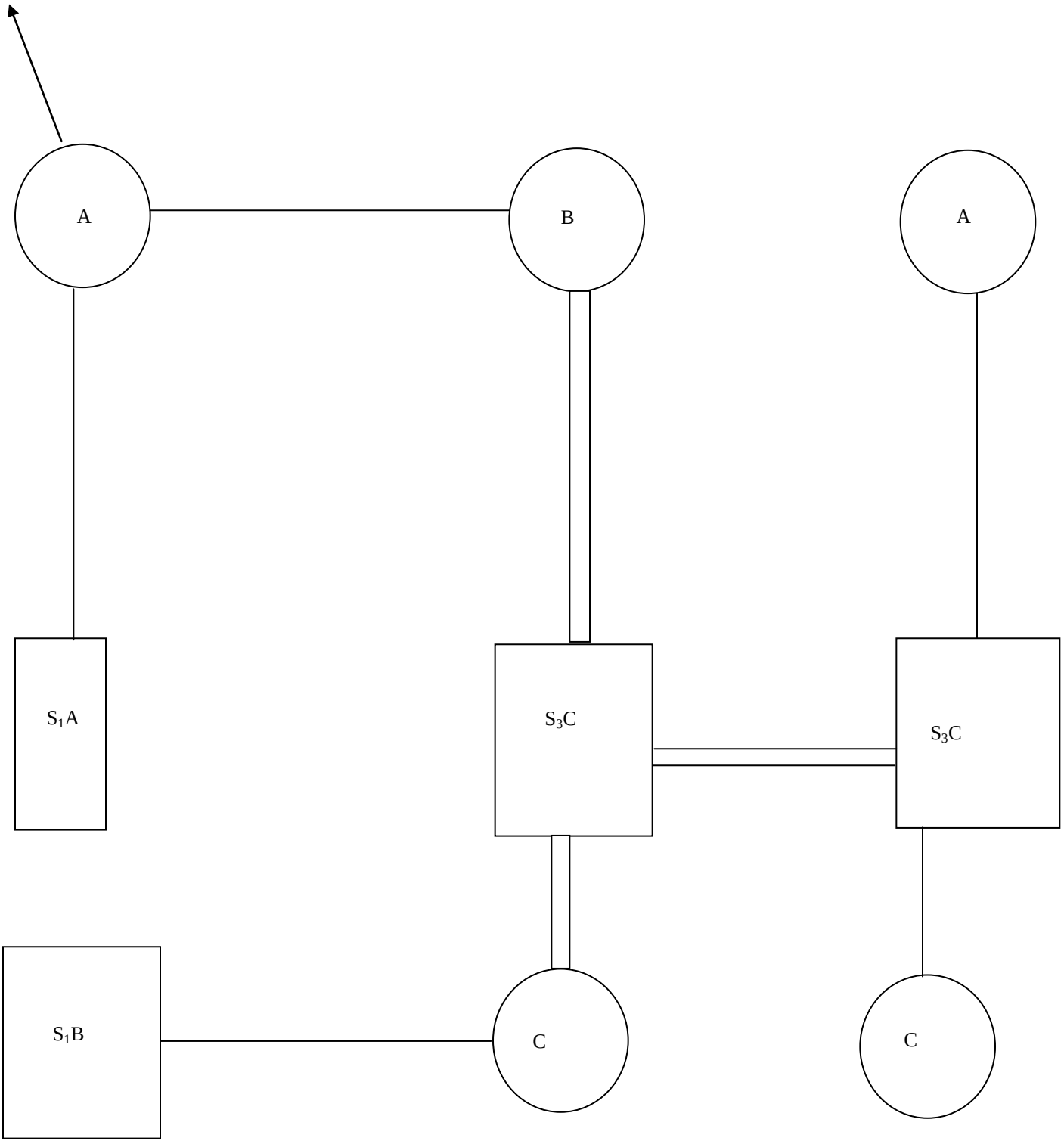
Romex

E.M.T.



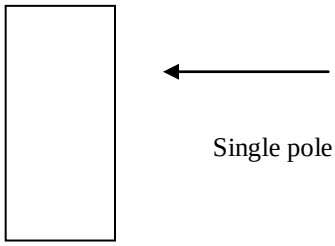
Name: _____ Seat # _____

Romex

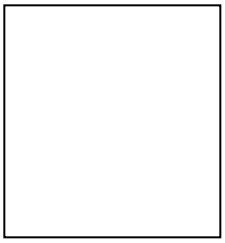


Name: _____ Seat # _____

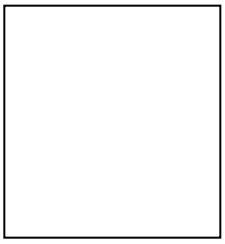
1. The single pole switch feeds the light and one half of the split receptacle.
2. The single receptacle and one half of the split receptacle are alive at all times.
3. Use 3 pieces of romex and 1 piece of EMT.



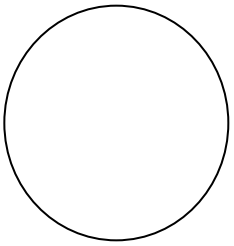
Single pole switch



Split receptacle



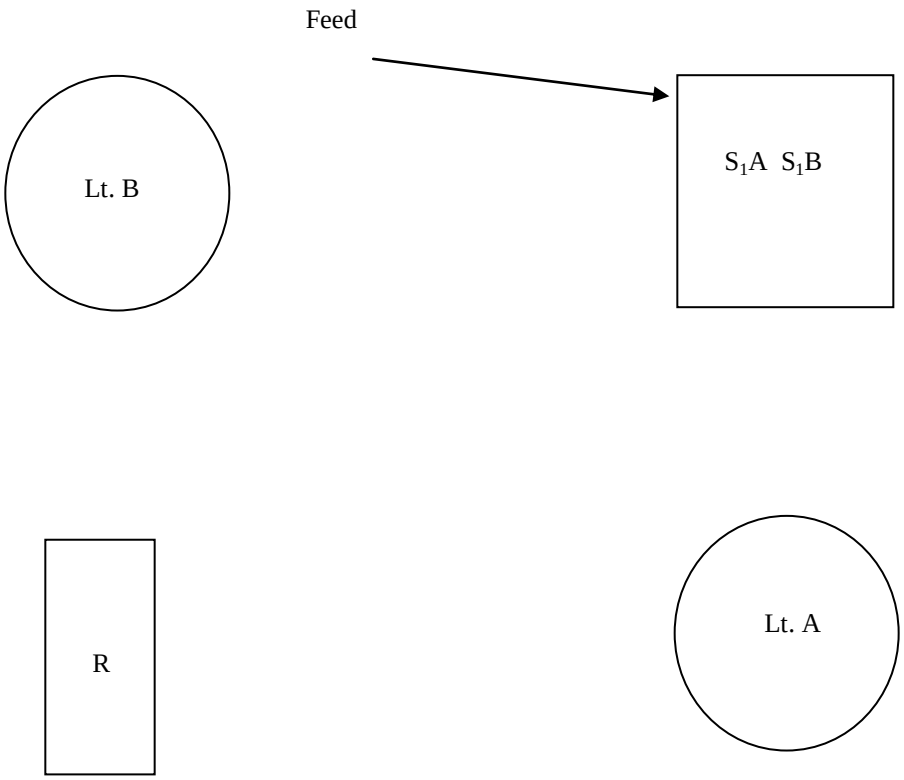
Single receptacle



Light

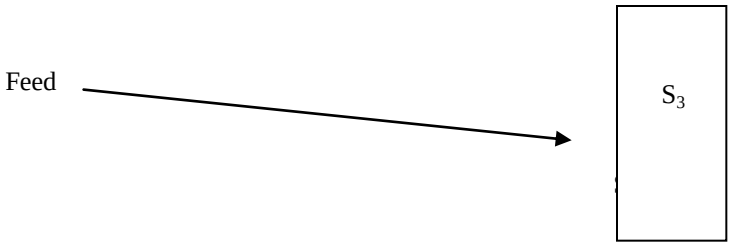
Name: _____ Seat # _____

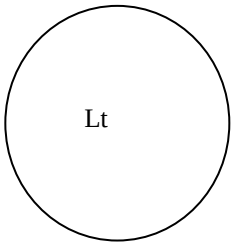
1. Switch A controls light A and switch B controls light B.
2. Single receptacle is alive all the time
3. Use 3 pieces of romex and 1 piece of EMT.

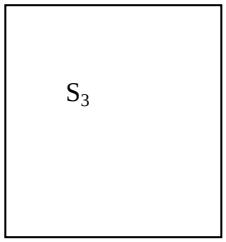


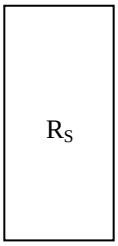
Name: _____ Seat # _____

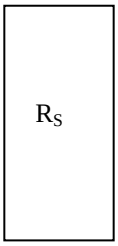
1. Both 3-way switches control the light and top half of the split receptacle.
2. The bottom half of the split receptacle is alive all the time
3. Use 3 pieces of romex and 2 piece of EMT.





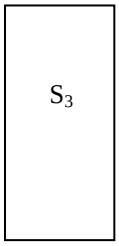


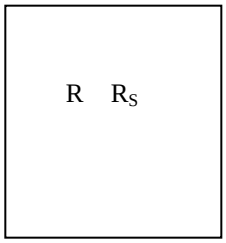


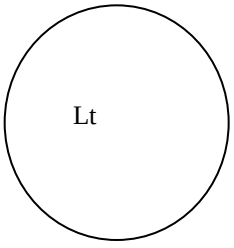


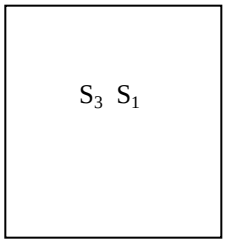
Name: _____ Seat # _____

1. Single pole switch controls ½ of split receptacle, the other ½ of the split receptacle and the other receptacle is a single receptacle and is hot all the time
2. The two 3-way switches control the light. The feed is at the light
3. Use 3 pieces of romex and 1 piece of EMT.



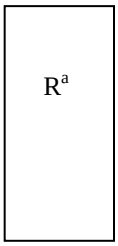


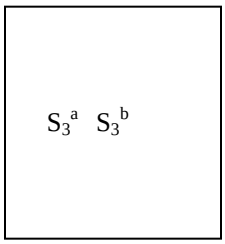


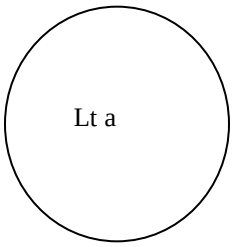


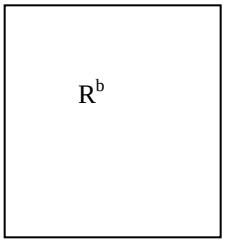
Name: _____ Seat # _____

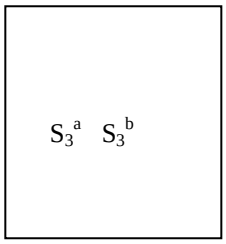
1. Switch a controls light a and receptacle a. Switch b controls light b and receptacle b
2. Single receptacle R is alive at all times.
3. Use 6 pieces of romex and 1 piece of EMT.

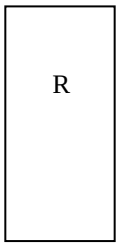


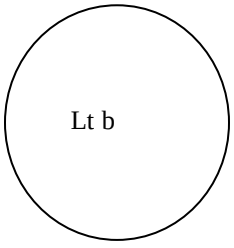






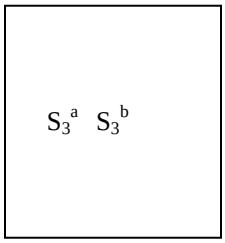


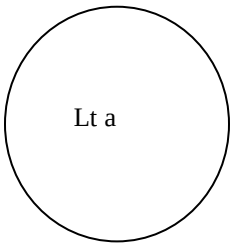


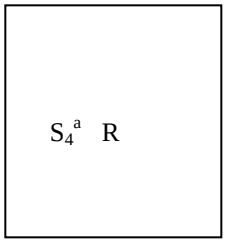


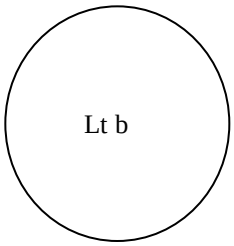
Name: _____ Seat # _____

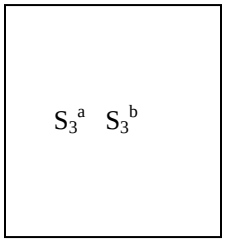
1. Switch a controls light a and switch b controls light b.
2. Single receptacle (R) is alive at all times. Feed is at Lt.a
3. Use 3 pieces of romex and 2 pieces of EMT.
4. Use plaster rings on all boxes.





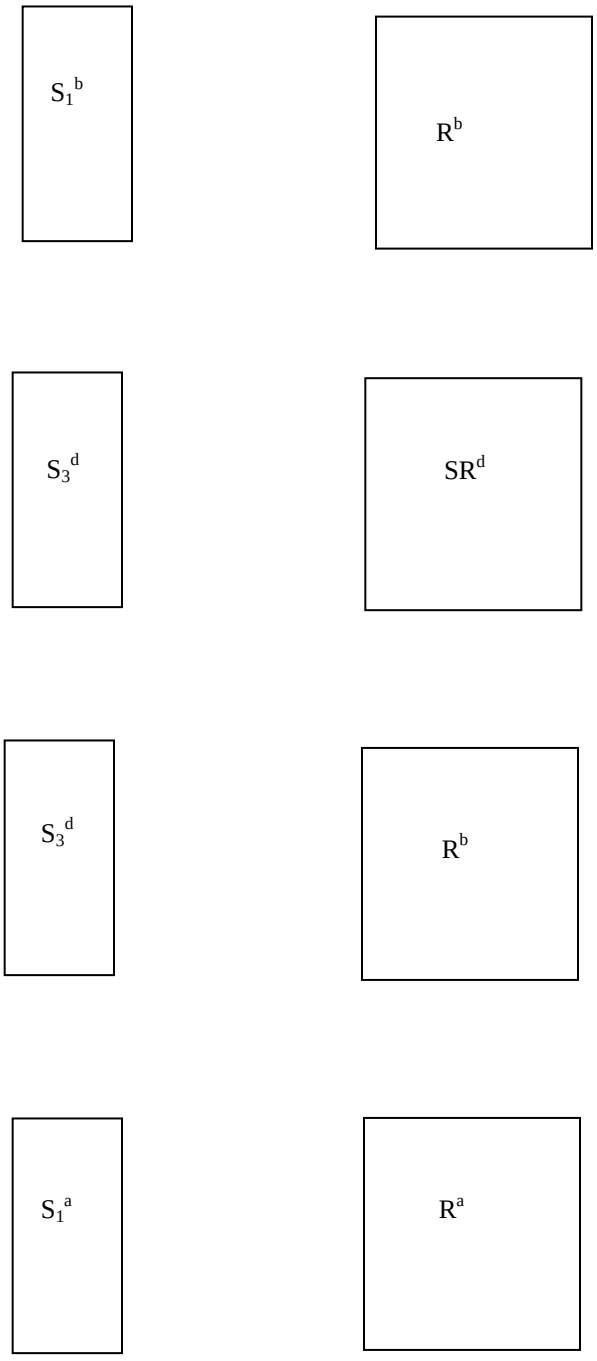






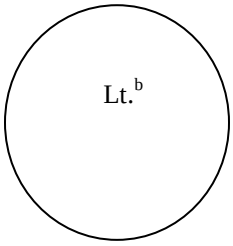
Name: _____ Seat # _____

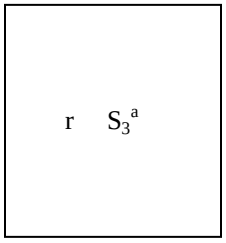
1. SR^d is a split receptacle. Feed is at the split receptacle. All other receptacles are single receptacles.
2. Use 7 pieces of romex and 1 piece of EMT.

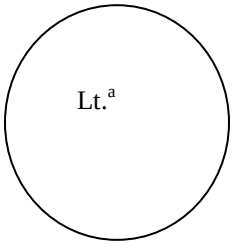


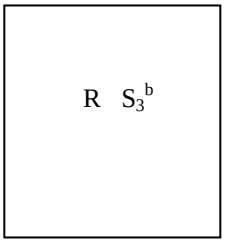
Name: _____ Seat # _____

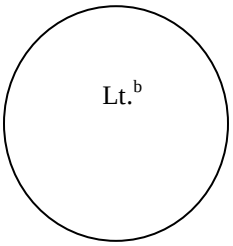
1. Switches a controls lights a which are connected in series
2. Switches b controls lights b which are connected in parallel
3. R's are single receptacles(hot at all times) and r's are split receptacles(half hot and half switched) and controlled by b switches. Feed is at Lt.a.
4. Use 5 pieces of romex and 3 pieces of EMT.

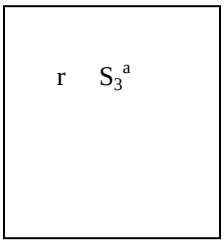


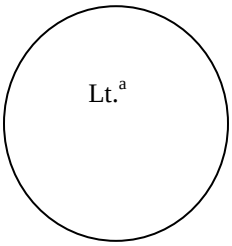


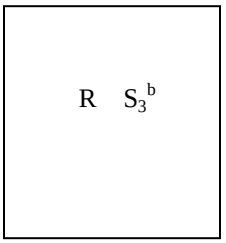






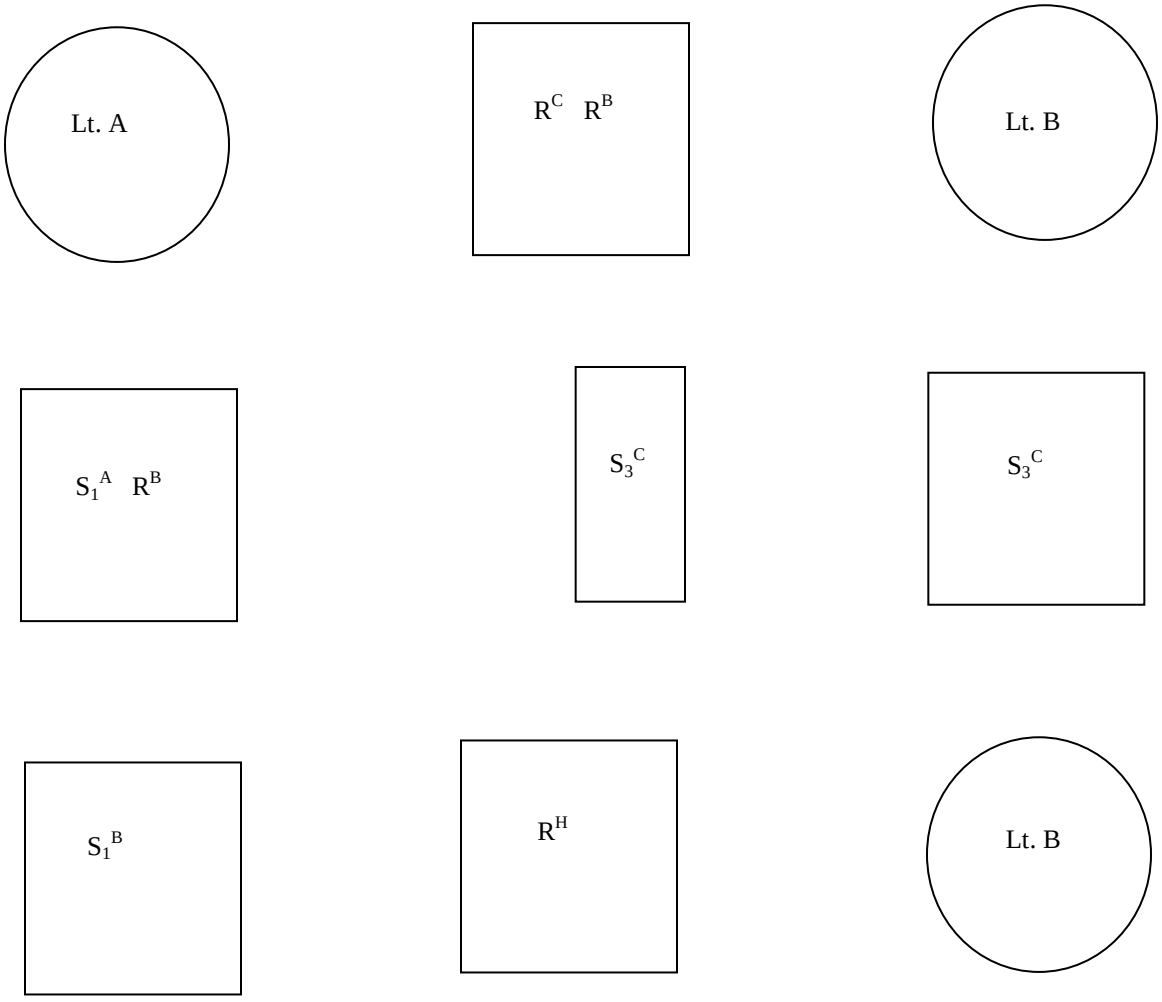






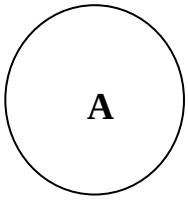
Name: _____ Seat # _____

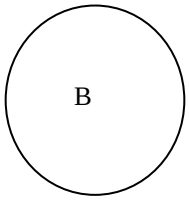
1. Switches S_3^C controls R^C; switch S_1^B controls Lt.'s B, R^B and R^H; switch S_1^A controls Lt. A; R^H is a split receptacle and all others are single receptacles. Feed is at Lt. A
2. Use 9 piece of romex

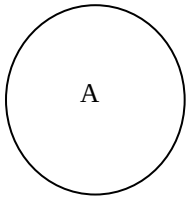


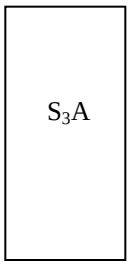
Name: _____ Seat # _____

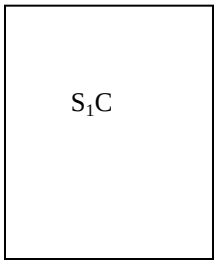
1. Use 7 pieces romex and 1 piece of EMT.

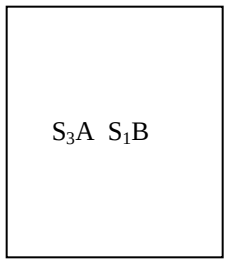


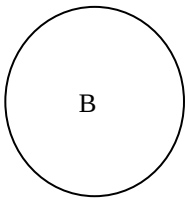


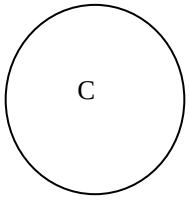






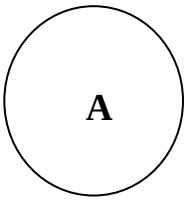


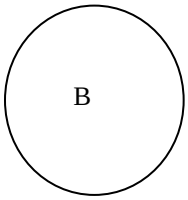


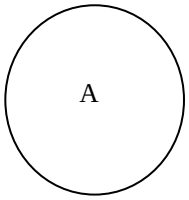


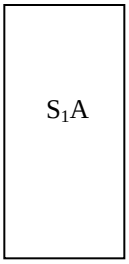
Name: _____ Seat # _____

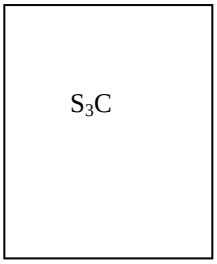
Use 6 pieces of romex and 3 pieces of EMT

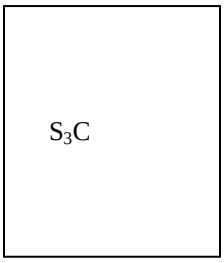


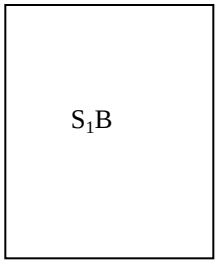


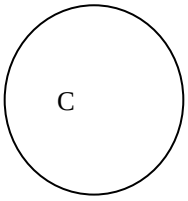


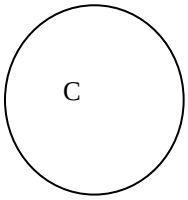




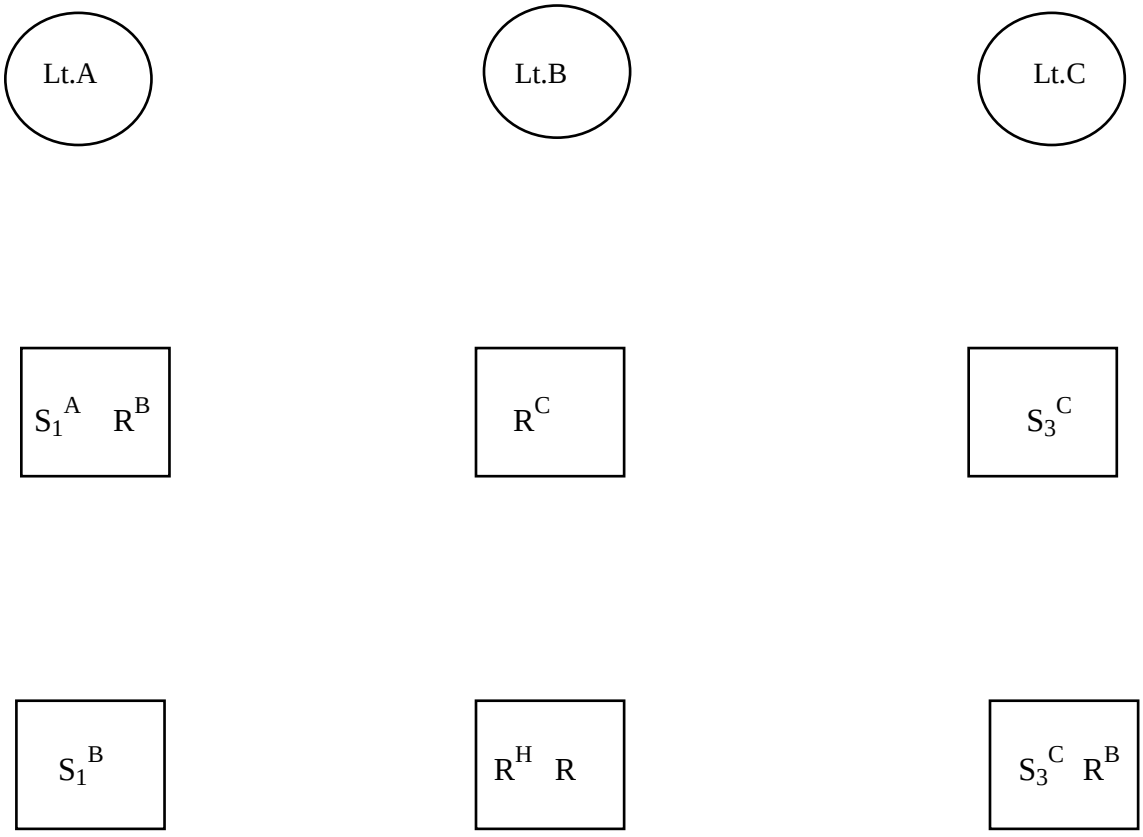








Name: _____ Seat # _____



Directions

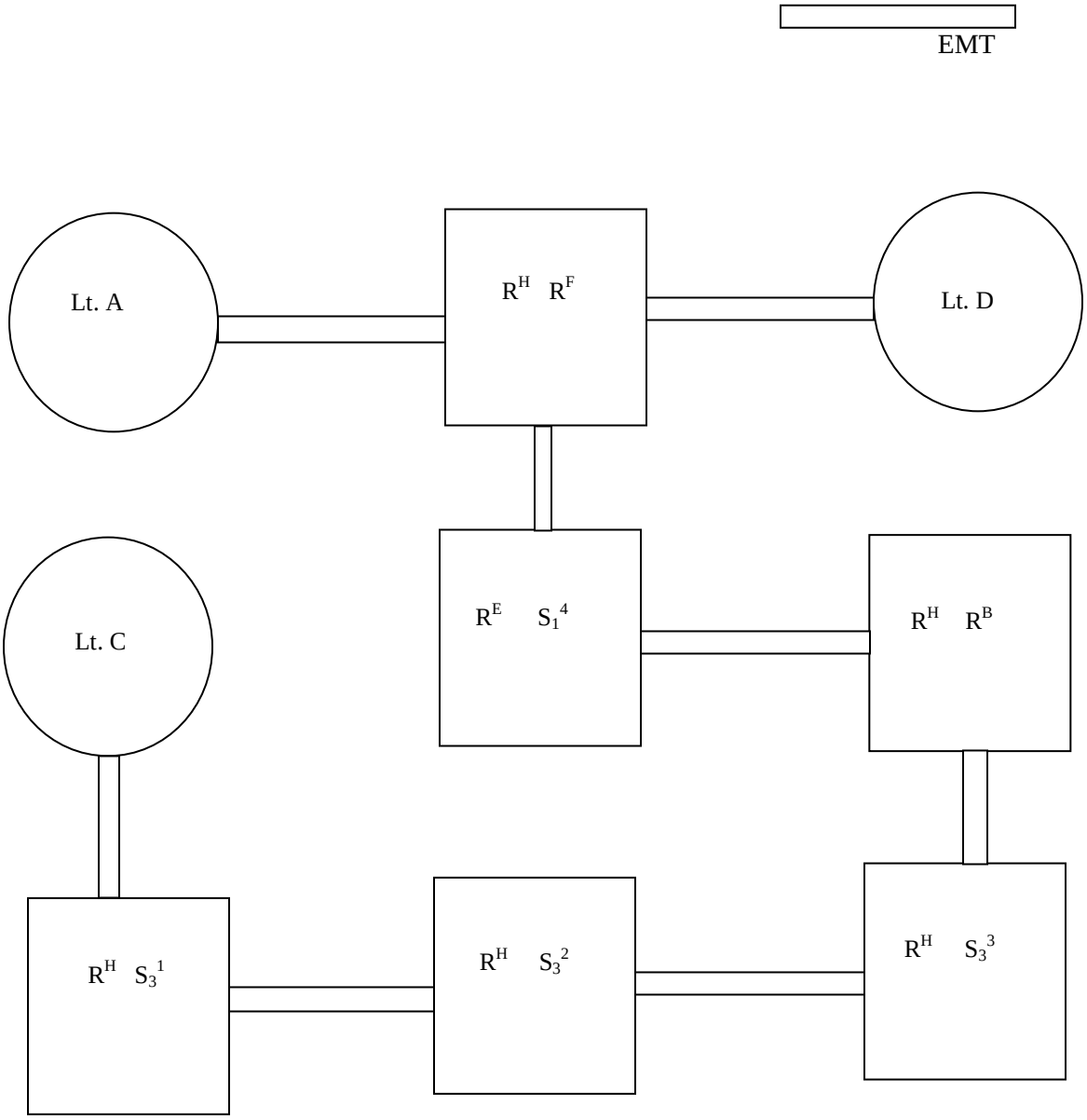
1. Cables allowed are: 1-EMT, 2-14/2 romex and 6-14/3 romex. 1 of the 6 pieces of 14/3 romex is to be used for the 2 circuit feed.
2. Terminate grounds in the 8B boxes using 10/32 screws and in the 1900 boxes, use the ground screws on the switches or the receptacles.
3. Four receptacles, (R, R^C and both R^B receptacles) are single receptacles
4. Fasten all plaster rings

1. Circuit 1 --- Switch S_1^A controls Lt.A
2. Circuit 1 --- Switch S_1^B controls Lt.B, R^H and both R^B receptacles with R^H being a split receptacle, half hot at all times
3. Circuit 2 -- Switches S_3^C controls R^C
4. Circuit 2 --- Light C is a P.C. (pull chain)
5. Circuit 2 --- Receptacle R which is hot at all times

Name: _____ Seat # _____

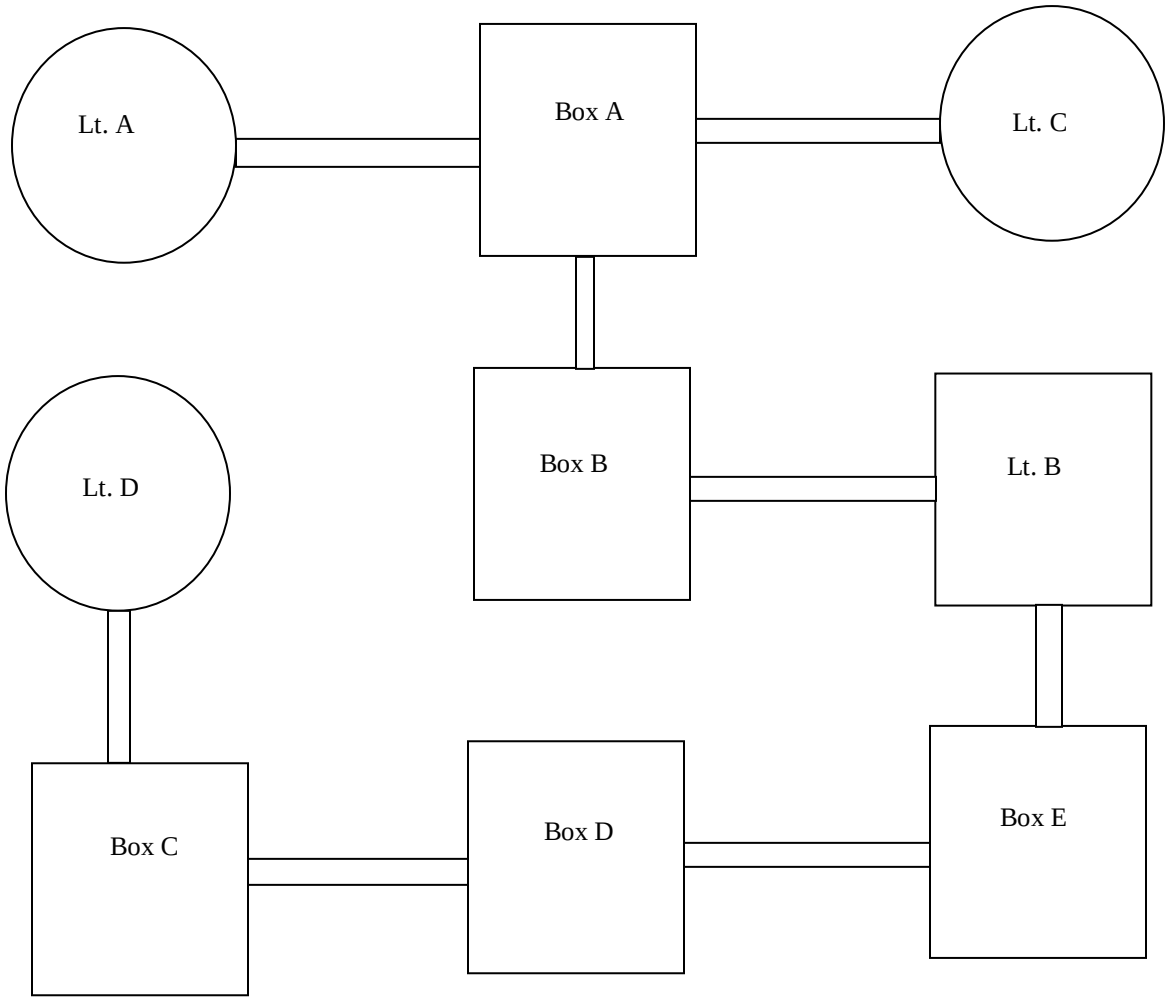
Projects 43 and 44 – use same board.

1. Switch 1: up position light A is on &receptacle F is off, down position light A is off & receptacle F is on.
2. Switch 2: up position light C is on & receptacle E is off, down position light C is off & receptacle E is on.
3. Switch 3: up position light D is on & receptacle B is off, down position light D is off & receptacle B is on.
4. Switch 4: on and all outlets work as stated above, off and none of the outlets will work.
5. R^H receptacles are hot all the time.
6. R^B ,R^E and R^F are all split receptacles and all others are single receptacles.
7. Feed is at Lt. D



Name: _____ Seat # _____

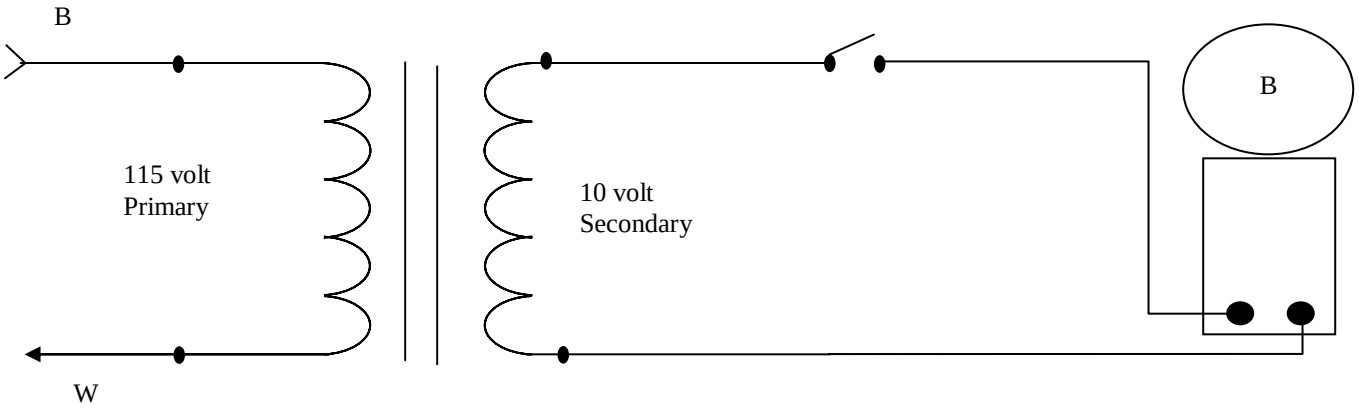
1. Box A is a 1p switch with pilot light controlling light A (cir.1).
2. Box B is a combination two 1p switches controlling lights B & C (cir.1).
3. Box C is a combination switch/receptacle with the switch controlling light D and the receptacle is hot at all times (cir.1).
4. Box D is a GFCI receptacle (cir.2).
5. Box E is a GFCI protected receptacle (cir.2).
6. Fasten the outlet at box E to the box with a WP cover.
7. Fasten everything to the boxes.
8. Feed is at a box of your choice.

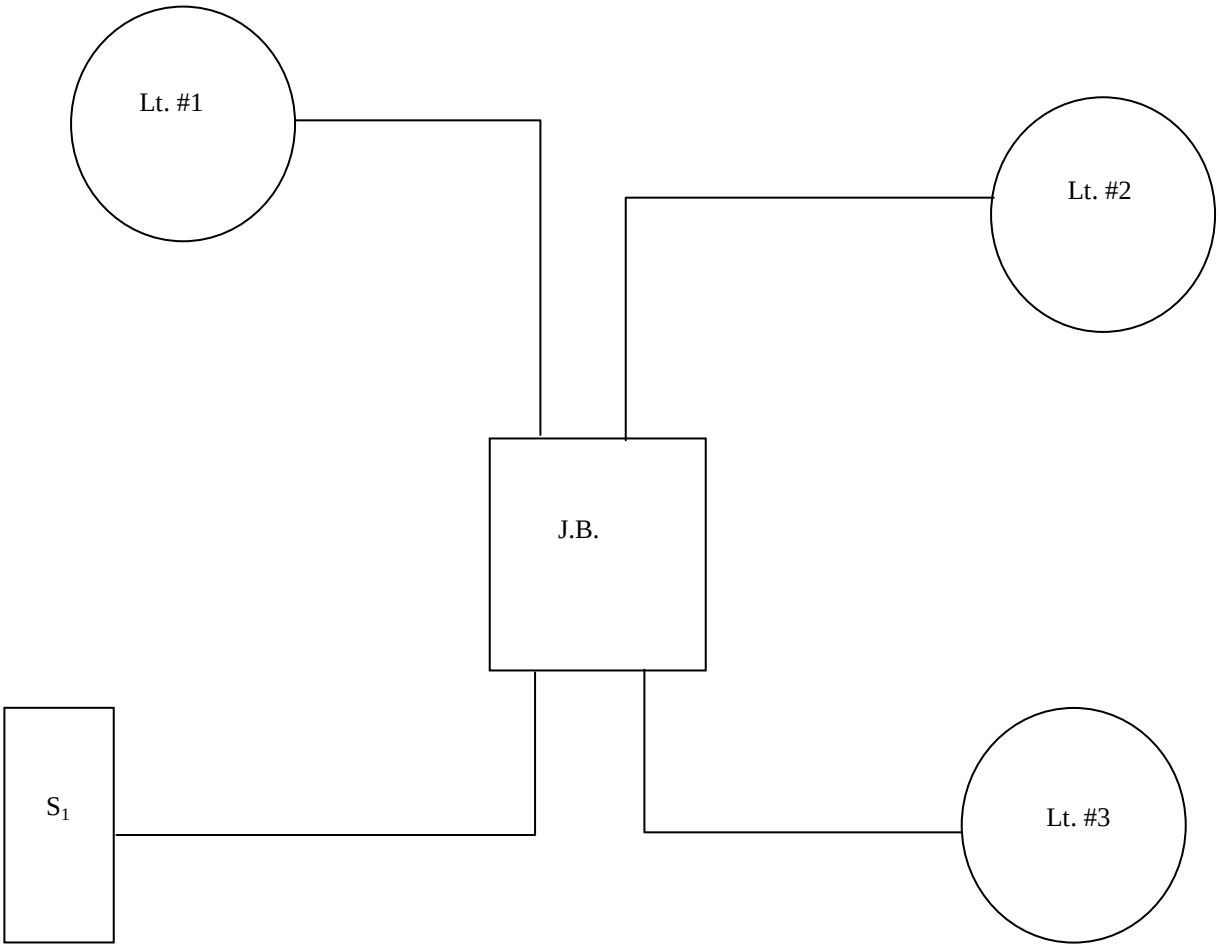


Name: _____ Seat # _____

Cord & cap
115 to 12 volt transformer

Single pole switch controls all three lights. Light #2 is in parallel and light #1 & #3 are in series. Feed, use a power cord, and transformer is at the junction box

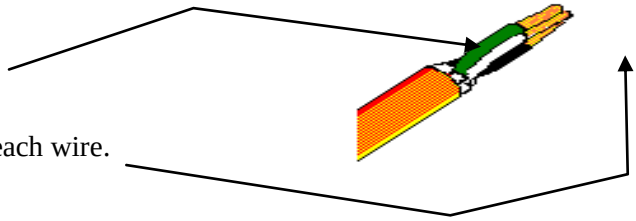




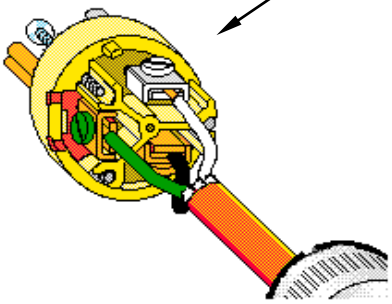
The plug for project # 45

1. Cut the cord's jacket 1 inch.

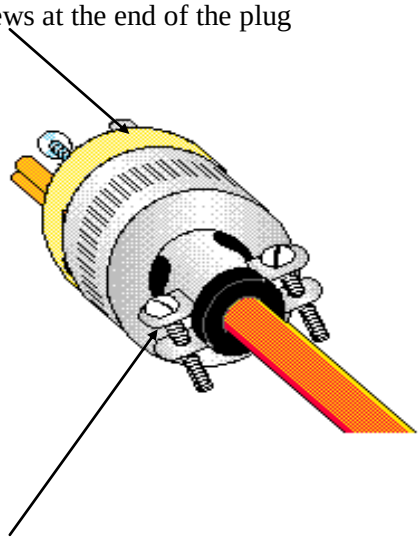
2. Strip 3/8 inch of insulation from each wire.



3. Loosen two screws set in the body face and pull out the rubber housing. Feed the cord through the rear opening in the housing.
4. Insert the white wire into the silver clamp & tighten.
5. Insert the black wire into the brass clamp & tighten.
6. Insert the green wire into the green clamp & tighten.
7. Align the notch with the grove



8. Tighten the three screws at the end of the plug



9. Tighten the two screws at the other end of the plug
10. Cut the cords jacket 6 inches and fasten it to project #1 using a box connector.

Name: _____ Seat # _____

Cord & cap
115 to 12 volt transformer

Single pole switch controls all three lights. Light #2 is in parallel and light #1 & #3 are in series. Feed, use a power cord, and transformer is at the junction box