acoustic cloud installation
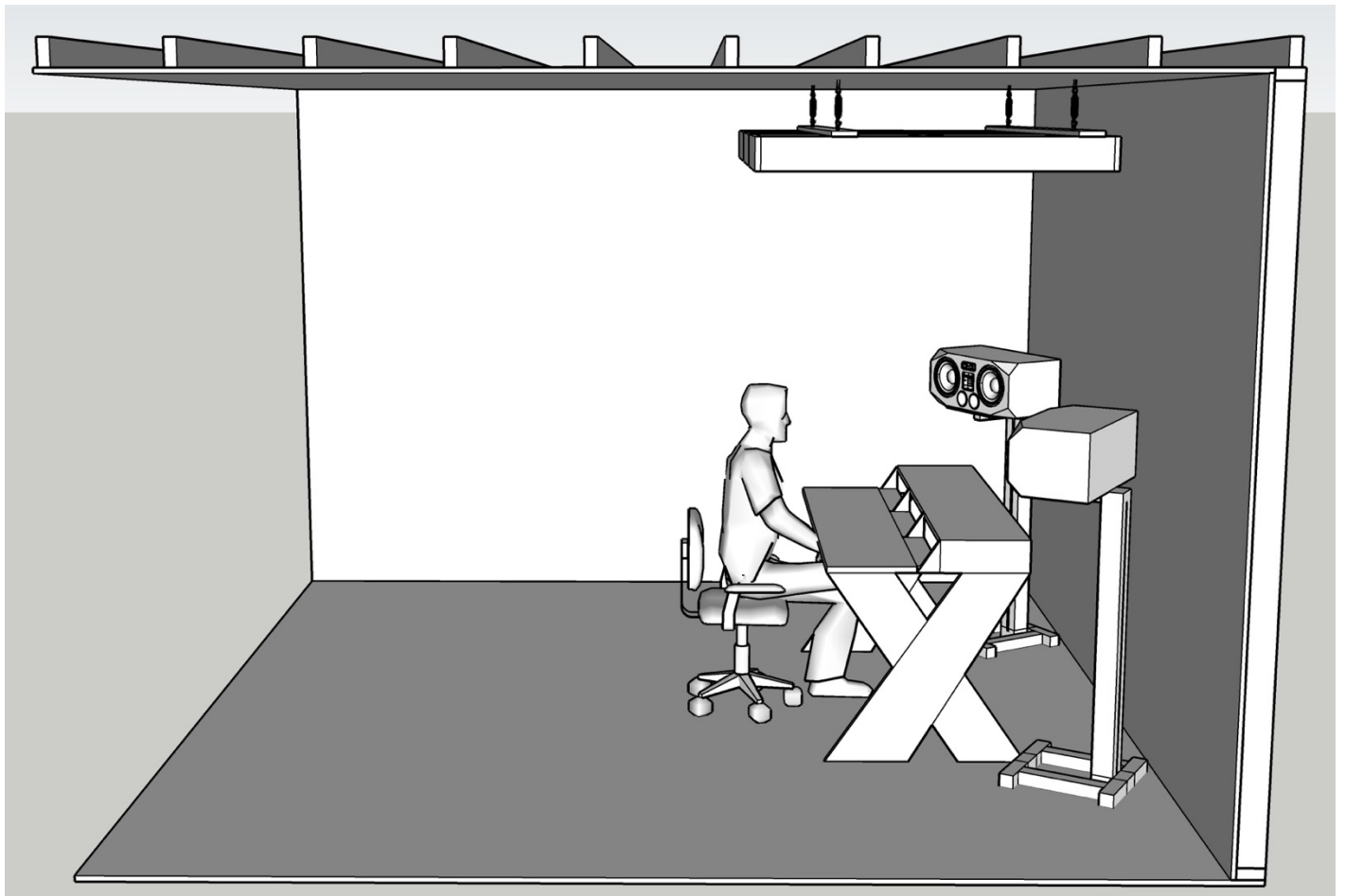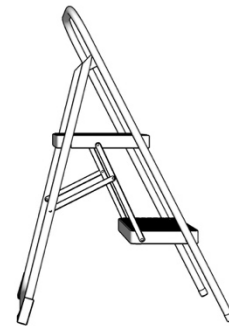## ceiling installation guide

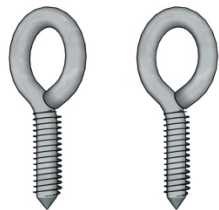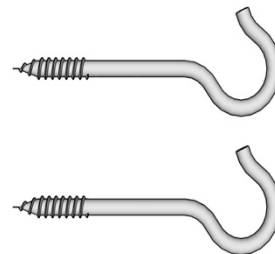

Music City **Acoustics**

required tools
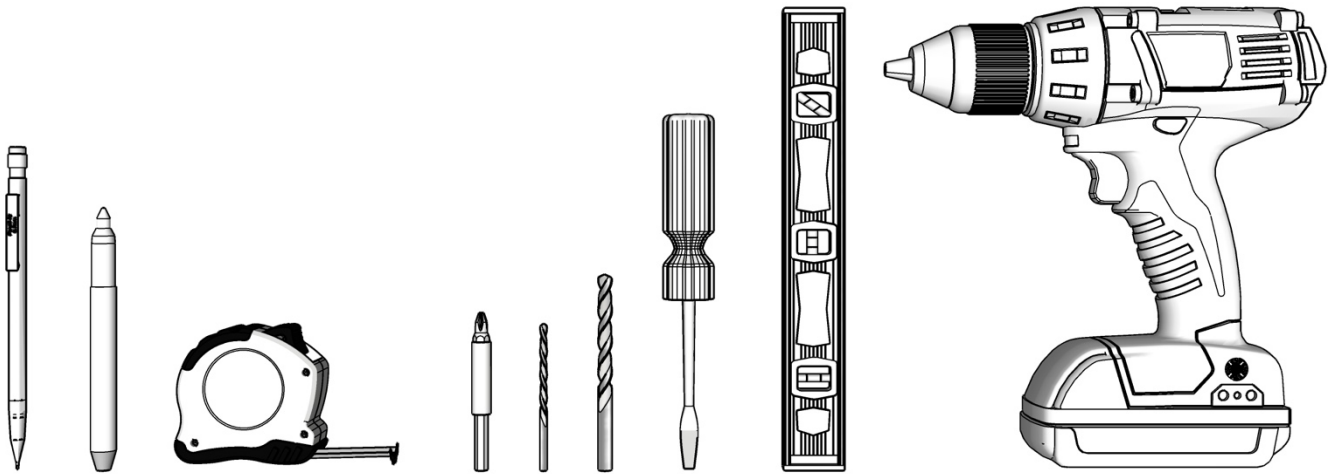
1. pencil
2. marker
3. tape measure
4. 1/8" drill bitt
5. 1/4" drill bit
6. drill
7. flat head screwdriver
8. step stool or ladder
9. a friend
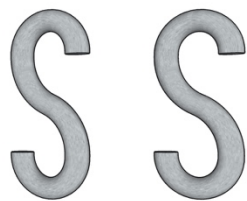10. a piece of paper!

Music City
Acoustics

hardware (per cloud)
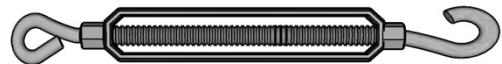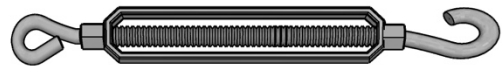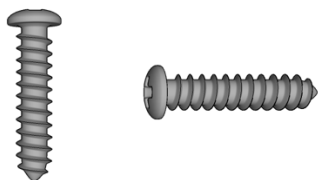
eye screws   x4

screw hooks   x4

s hooks   x4

turnbuckles   x4

2" screws   x24
* not included with hardware kit

1"x4"x 6'4" wood board   x2
*not included with hardware kit

Music City
Acoustics

completed assembly
(using three 4'x2' acoustic panels)
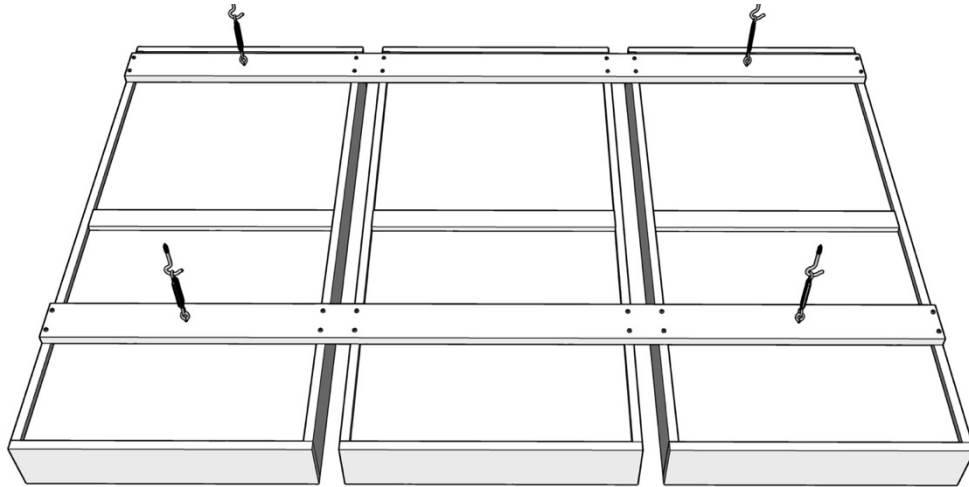
please read completely through the install guide before starting your installation.

this is not a hard installation but requires careful planning, accurate measurements, and a detailed drawing to work from. set aside at least 2 hours and be sure to have a friend assist you.

*we have created templates that can be printed to help get your room drawings started. they can be found at the end of the guide.

Music City
Acoustics

step 1 – measure the room

    a. measure the length, width, and height of your room

    b. measure the distance from the front wall to the listening position
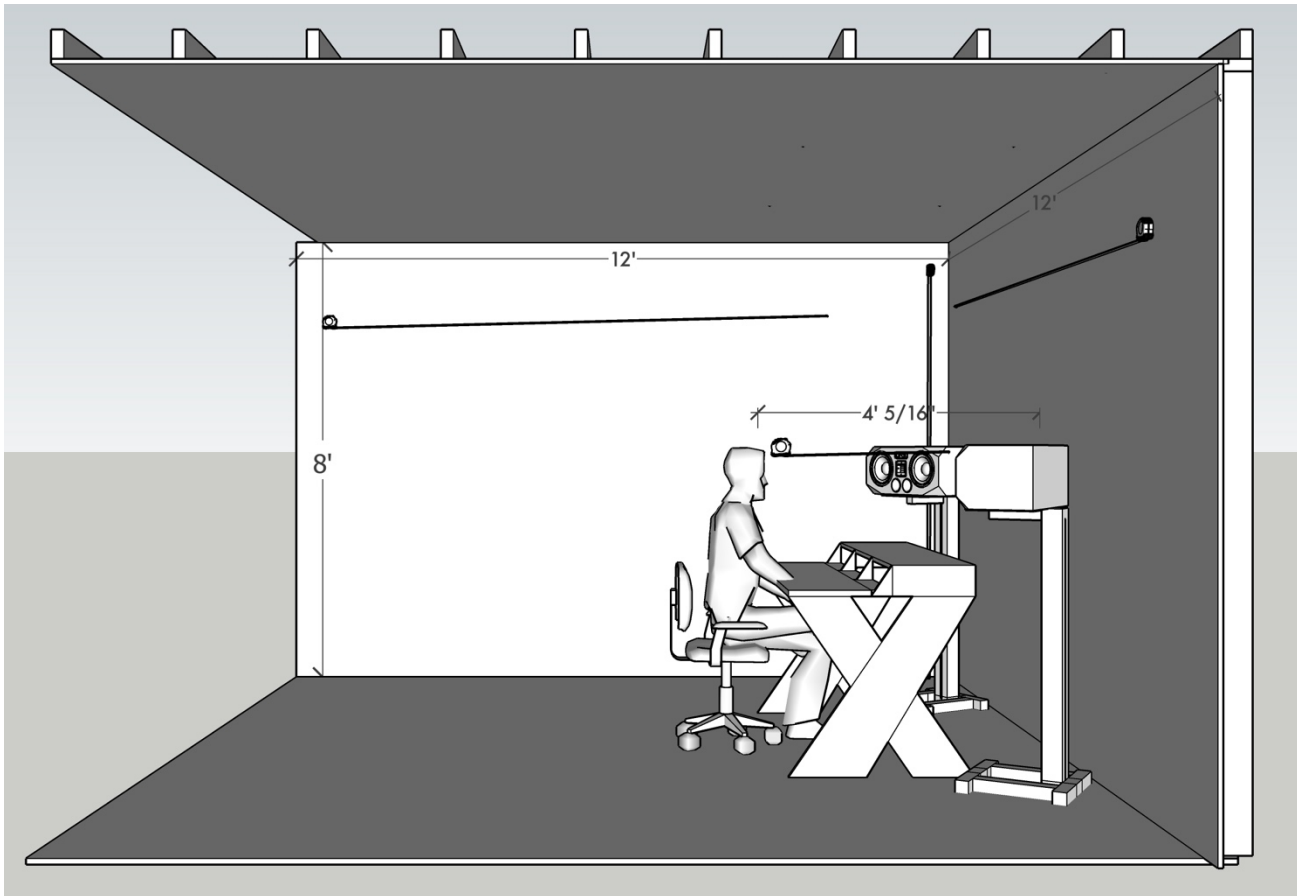

*measurements shown above and throughout this guide are just examples. as you work your way through the guide fill in your drawing with the measurements and locations for your room.

Music City
Acoustics

step 2 - find the studs in your ceiling

a. find and mark the location of studs in your ceiling

b. this will be much easier with a stud finder but can be done by knocking on the ceiling with your fist.
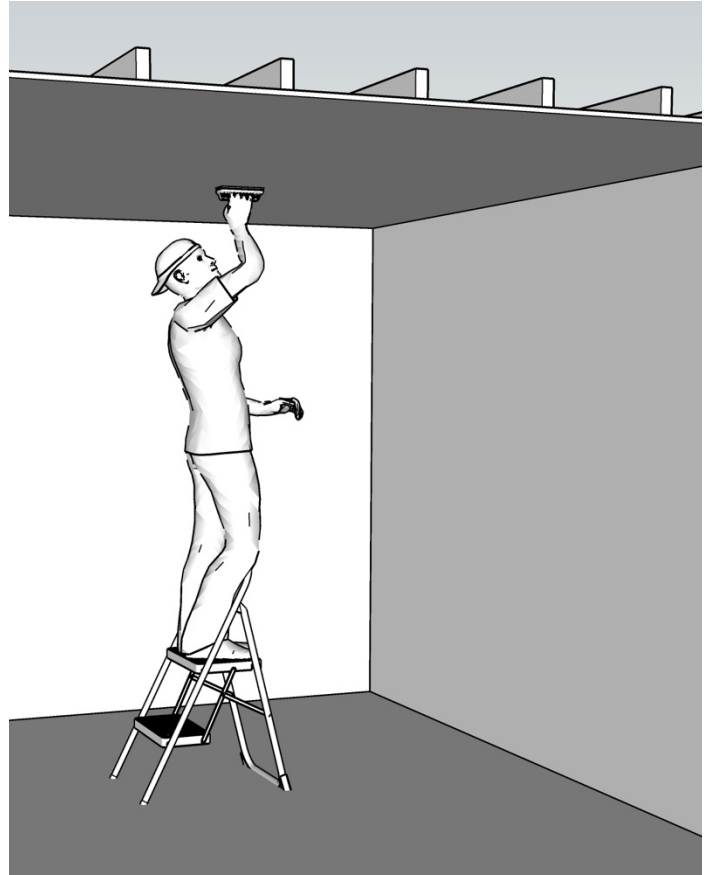
c. when fully assembled, the cloud will be very heavy. to safely install it, the ceiling hardware must be screwed into studs. <u>always double check your stud measurements are accurate by drilling small test hole.</u>

Music City
Acoustics

step 3 – room layout and studs

a. using your measurements from steps 1 and 2, sketch out your room showing the studs and listening position.
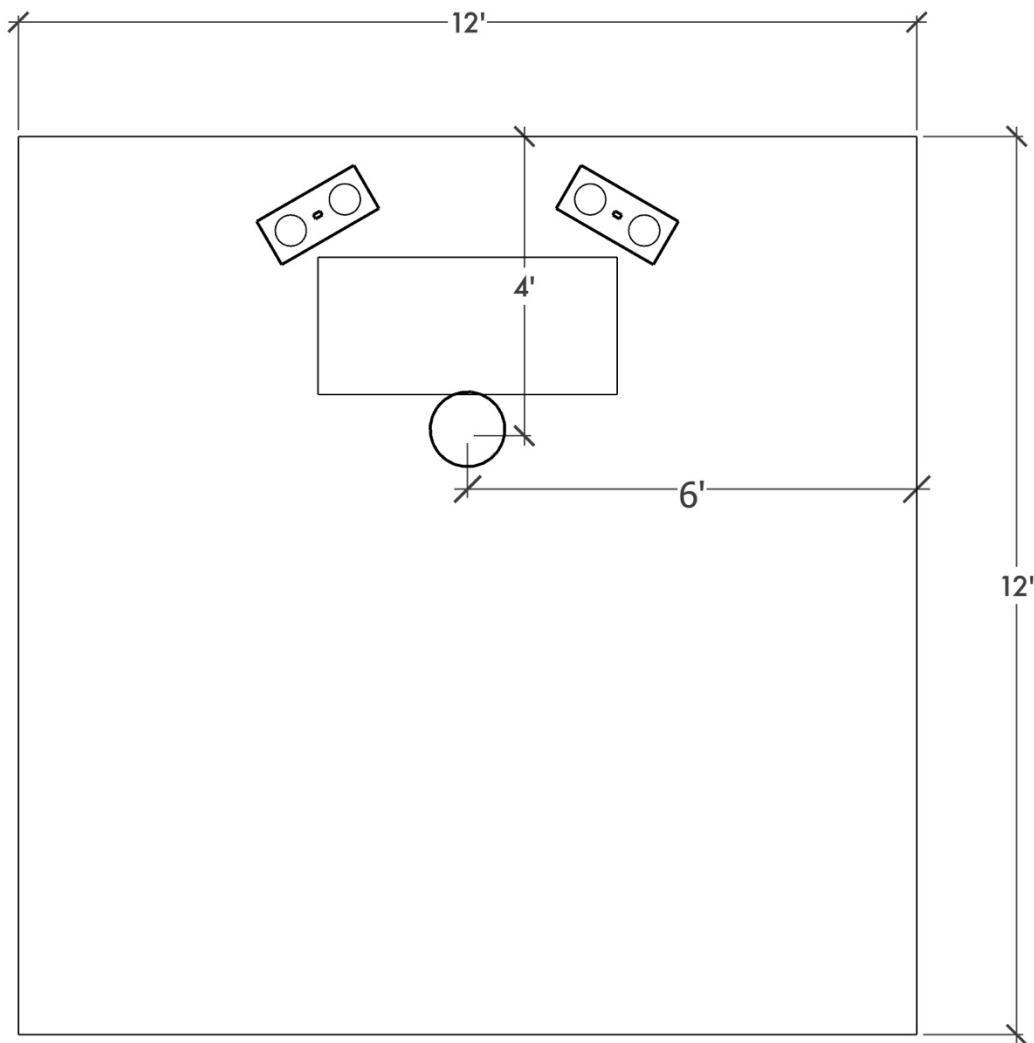

*listening position should be centered between the left and right walls. distance from the front wall will vary based on room layout and speaker configuration. if you need assistance finding the optimal room layout, reach out to us about a consultation. email: graham@musiccityacoustics.com

Music City
Acoustics

step 3 – room layout and studs cont.

a. add the ceiling studs to your sketch
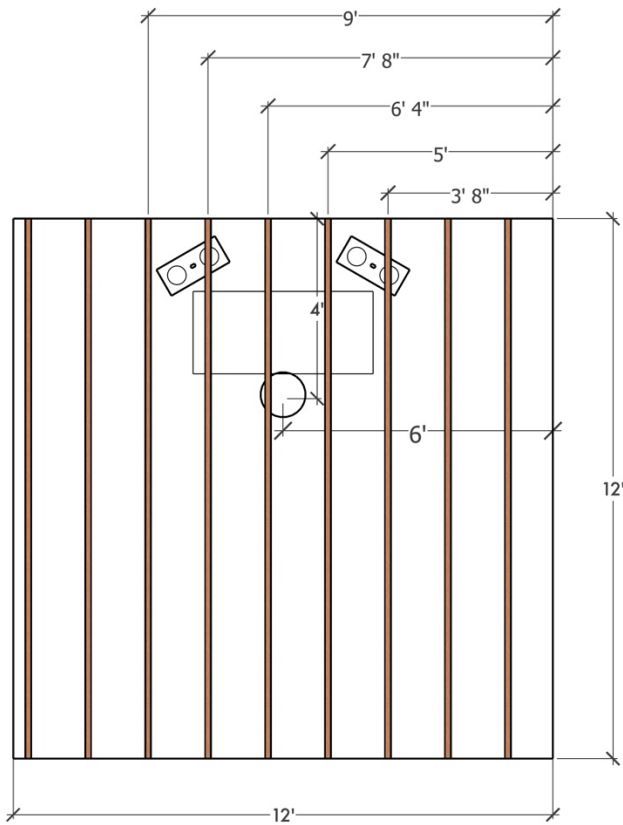
ex 1. the studs run from the front to the back of the room. this will put you on the perpendicular track in step 4
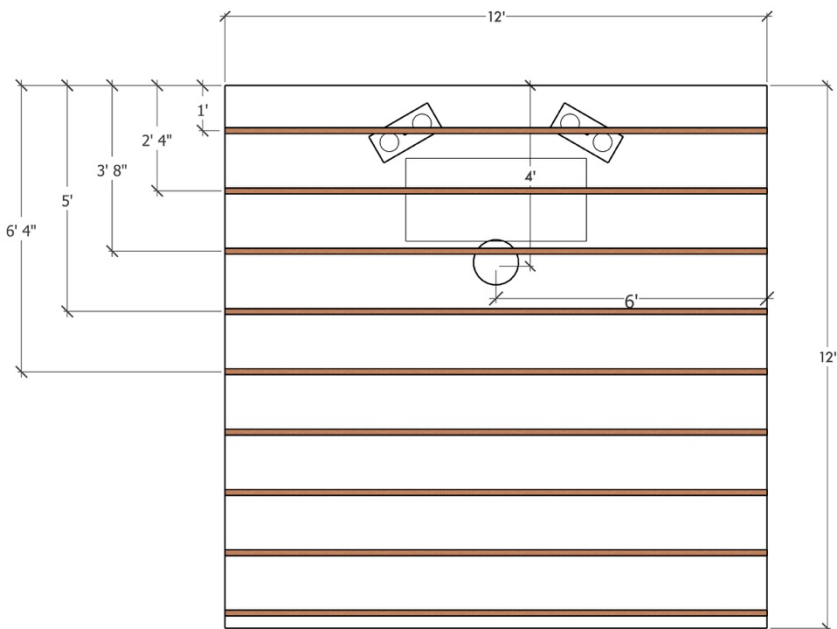

ex 2. the studs run from left to right in the room. this will put you on the parallel track in step 4

* measurements shown throughout this guide are just examples. measurements will vary from room to room.

Music City
Acoustics

step 4 – cloud placement and layout

a. **draw the cloud into the sketch.** the cloud should cover the entire listening position and ideally your monitors as well (in larger rooms multiple clouds may be needed).
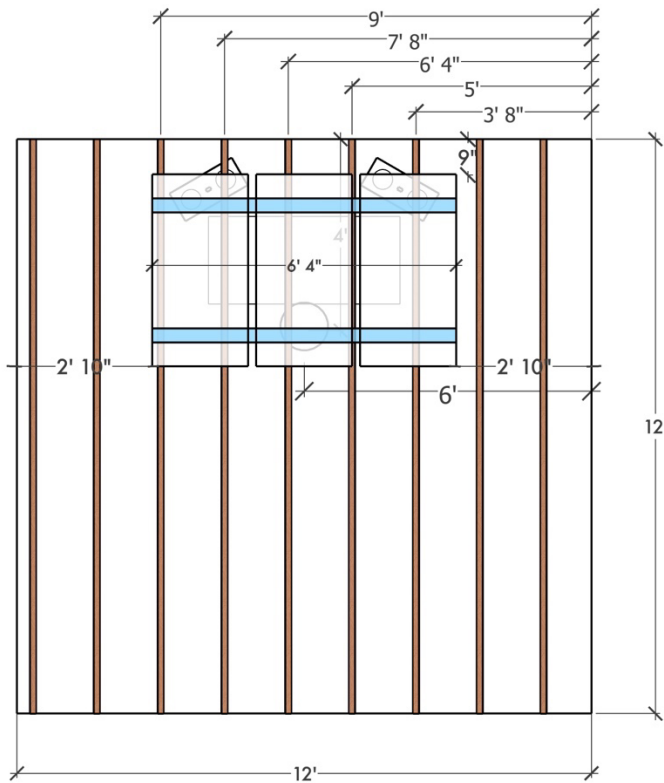
perpendicular stud layout: the 1x4 boards (highlighted in blue) can be installed at even distances from the front and back edges of the cloud. We recommend 4".
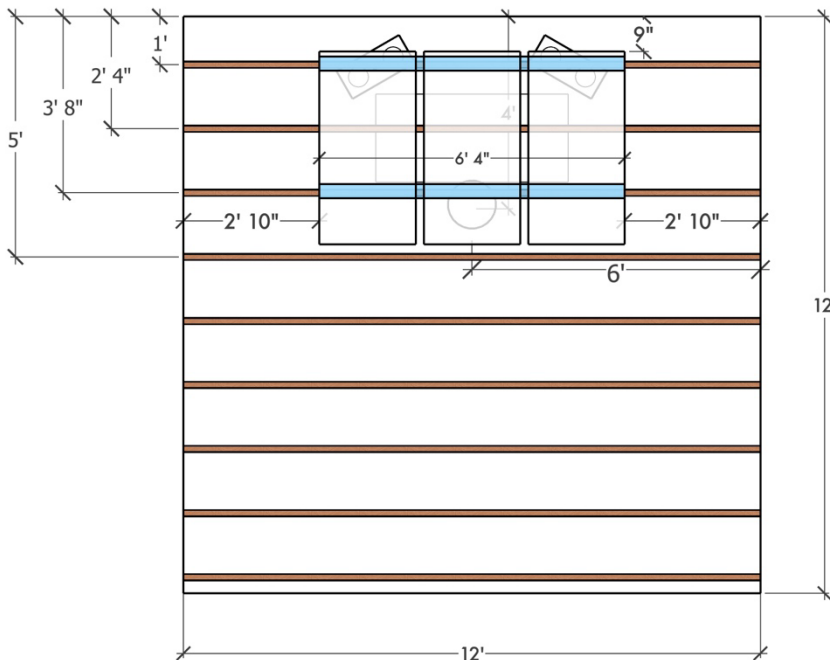
parallel stud layout: the 1x4 boards (highlighted in blue) are installed centered on the ceiling studs. Select the studs closest to the front and back edges of the cloud

9

Music City
Acoustics

for steps 5 through 8 this install guide is broken up into separate sections. use the corresponding section for your room
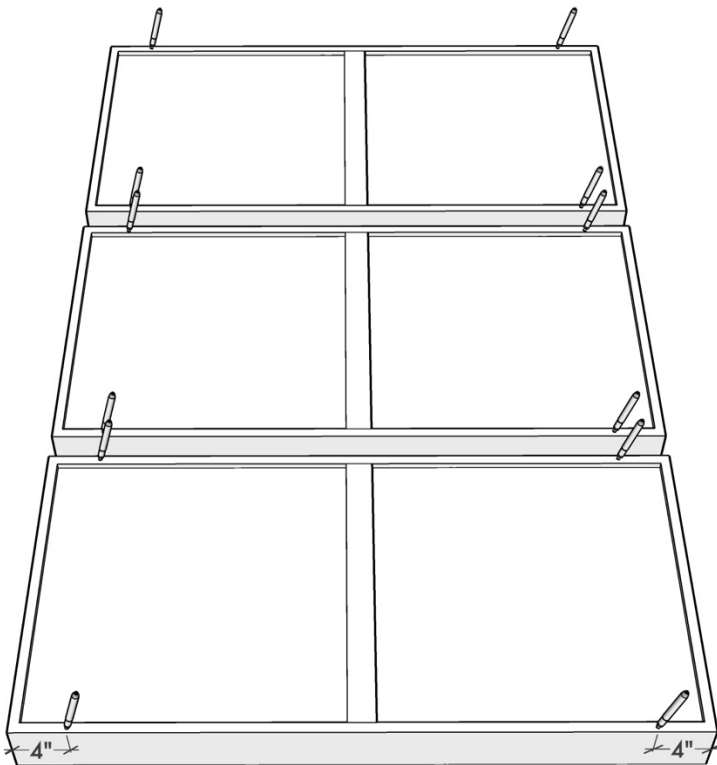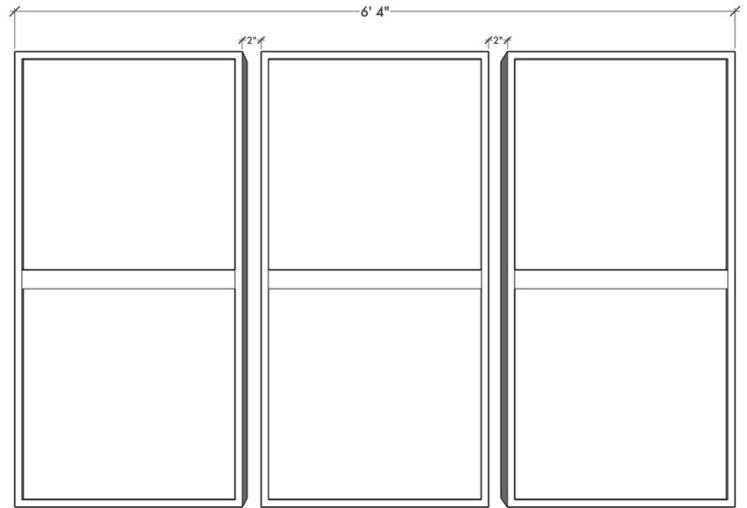
perpendicular stud layout:

parallel stud layout:

Steps 9 through 12 are the same for both layouts

Music City
Acoustics
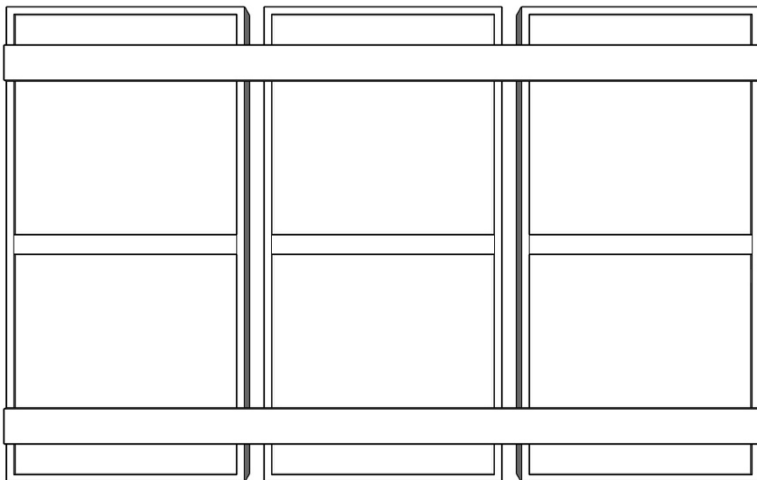
step 5 – assemble the cloud (perpendicular studs)

a. lay the panels on the floor with the back side of the panels facing up (make sure the floor is clean)

b. mark the panels on each side, 4" from the front and back edges (these marks will be used to line up the 1x4s)

Music City **Acoustics**

step 5 – assemble the cloud (perpendicular studs)

c.   line up the 1x4 boards with each mark

4"
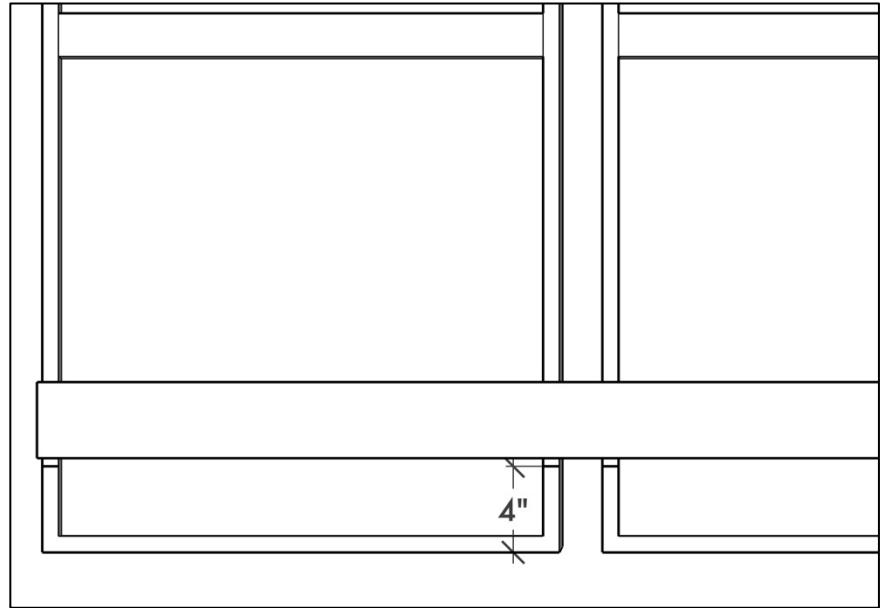
d. double check the alignment and spacing. your 1x4s are ready to be screwed down to the panels.

Music City
Acoustics

step 5 – assemble the cloud - <u>perpendicular studs</u>
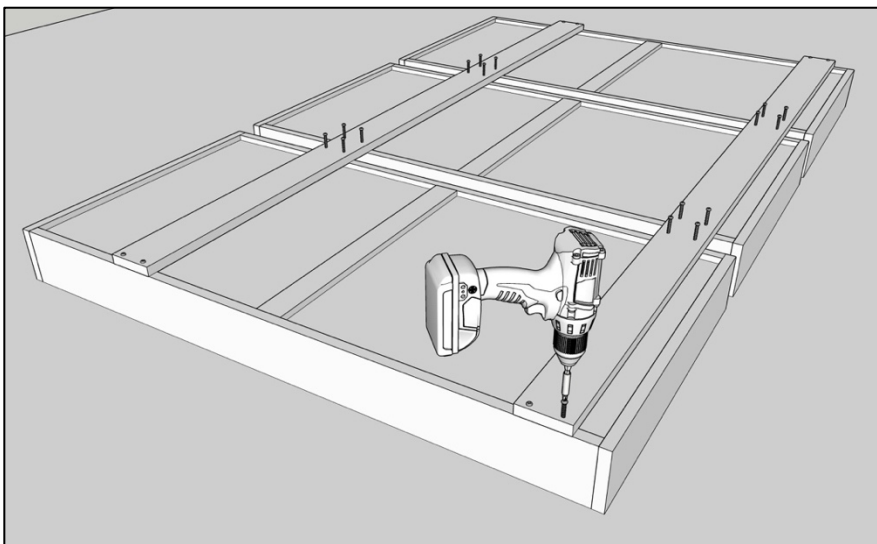
e.   using 1/8" drill bit, drill pilot holes

*start with outer edge of
the panels to ensure
proper alignment

f.   screw 1x4 boards to panels with 2" screws

*start with one screw on the outer edges of the cloud. screw in the middle panel last to ensure proper
alignment

Music City
Acoustics

step 6 – find eye screw locations for the cloud -
(perpendicular studs)

a. referencing your room layout drawing, determine which studs the cloud will hang from.

use the studs closest to the middle of the outer panels. this will ensure the weight is distributed evenly. from the example room we'll use the studs 3'8" and 7'8" from the right wall

b. calculate where the studs will intersect with the cloud (this is where the eye screws will be located on the cloud)

stud A ex.   3'8" – 2'10" = 10"

stud B ex.   9'2" – 7'8"   = 1'6"

equation explanation: calculate the difference between the stud to wall distance and cloud edge to wall distance. the answer will tell you how far from the cloud edge your eye screws will be.

Music City **Acoustics**

step 6 – find eye screw locations for the cloud - (perpendicular studs)

    c. using <u>your</u> results from step b, mark the eye screw locations on cloud
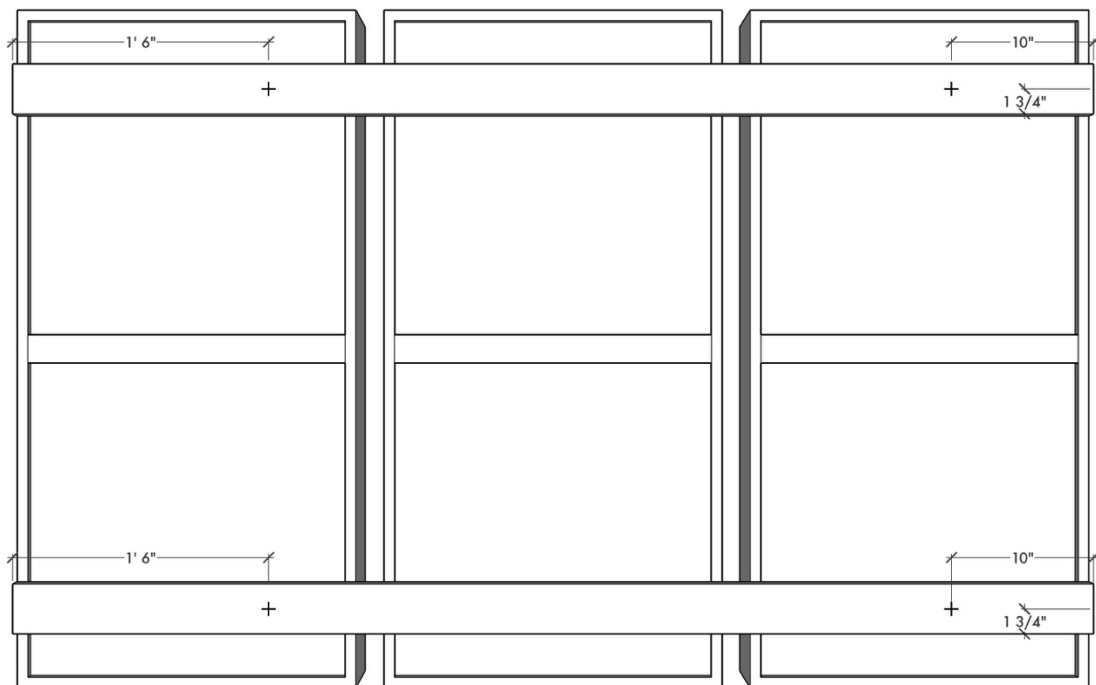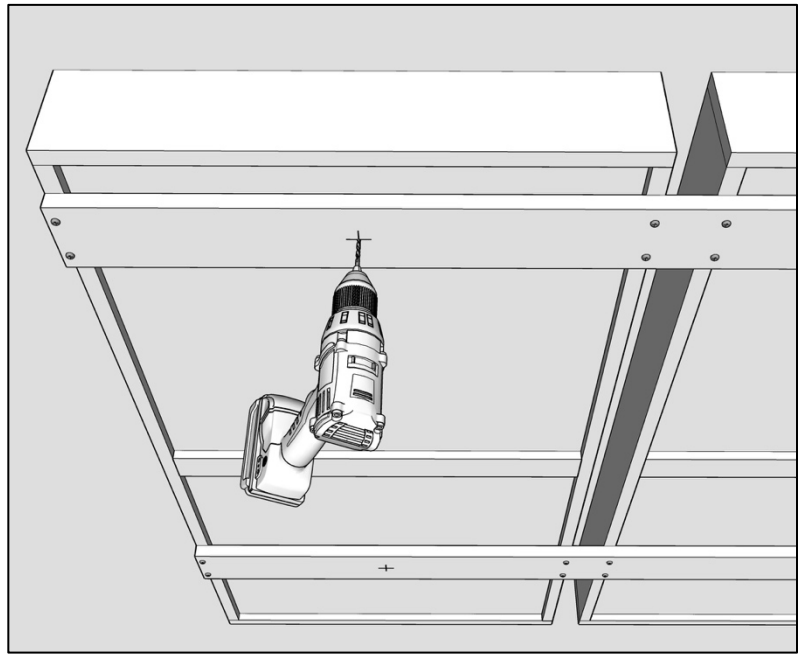

*1x4s are actually .75"x3.5", to center eye screws on 1x4s, measure 1.75" from edge as shown above
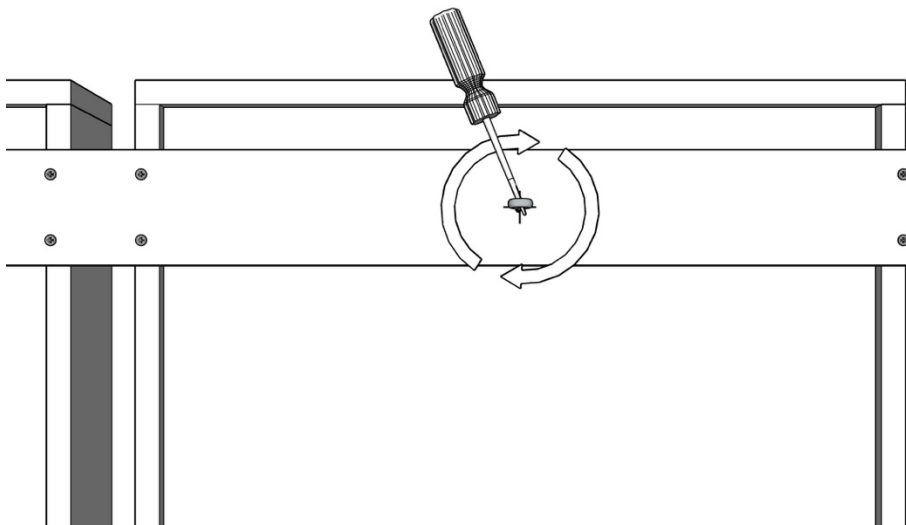
keep going you are almost done!

Music City **Acoustics**

step 7 – attach eye screws to the cloud
(perpendicular studs)

a. using 1/8" drill bit, drill pilot holes for eye screws

b. fasten eye screws to cloud

Music City
Acoustics
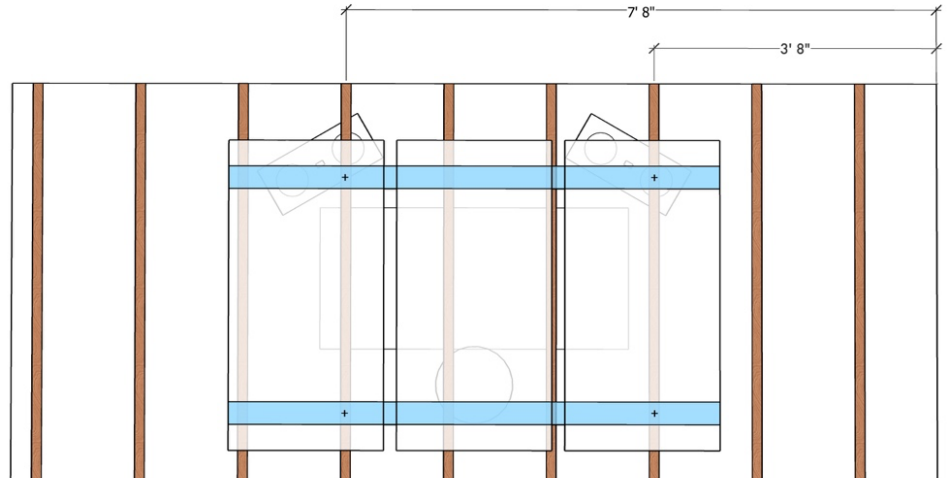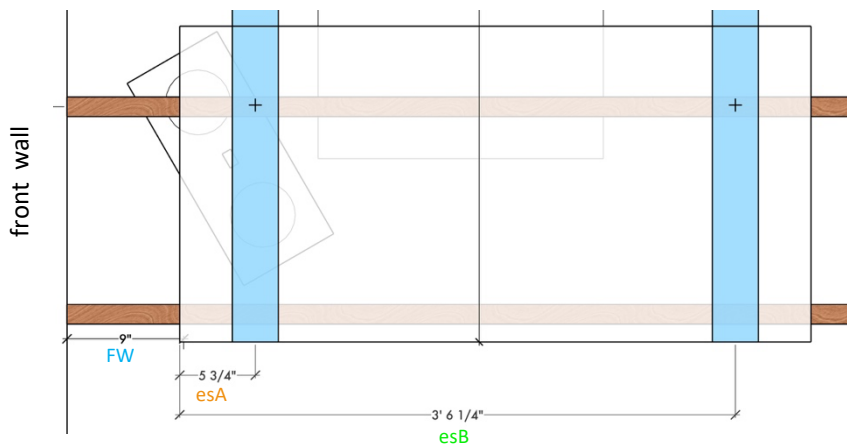
step 8 – find ceiling hardware locations
(perpendicular studs)

a. determine the distances from the side wall to the studs

7' 8"

3' 8"

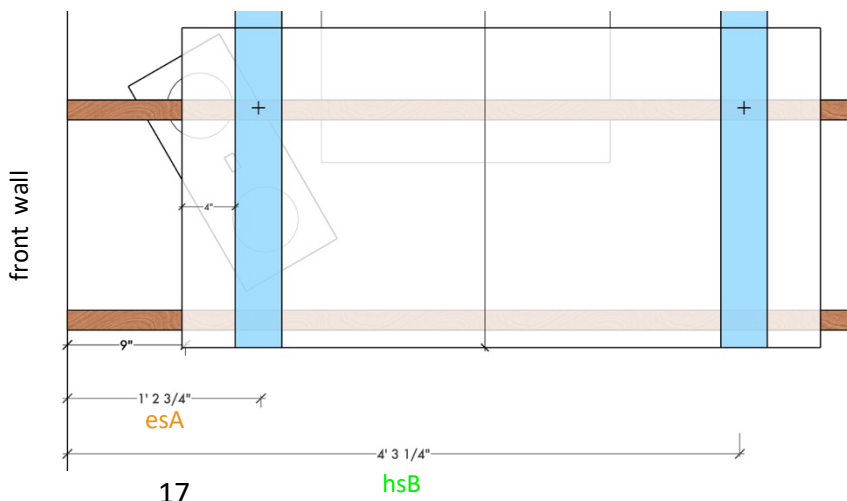b. determine distances from the front wall to the eye screws

front wall

9"
FW

5 3/4"
esA

3' 6 1/4"
esB

equation explanation:

$fw + esa =$ (hook screw distance from front wall

$fw + esb =$ hook screw distance from front wall

front wall

4"

9"

1' 2 3/4"
esA

4' 3 1/4"
hsB

$hsA = 9'' + 5\ 3/4'' = 1'\ 2\ 3/4''$

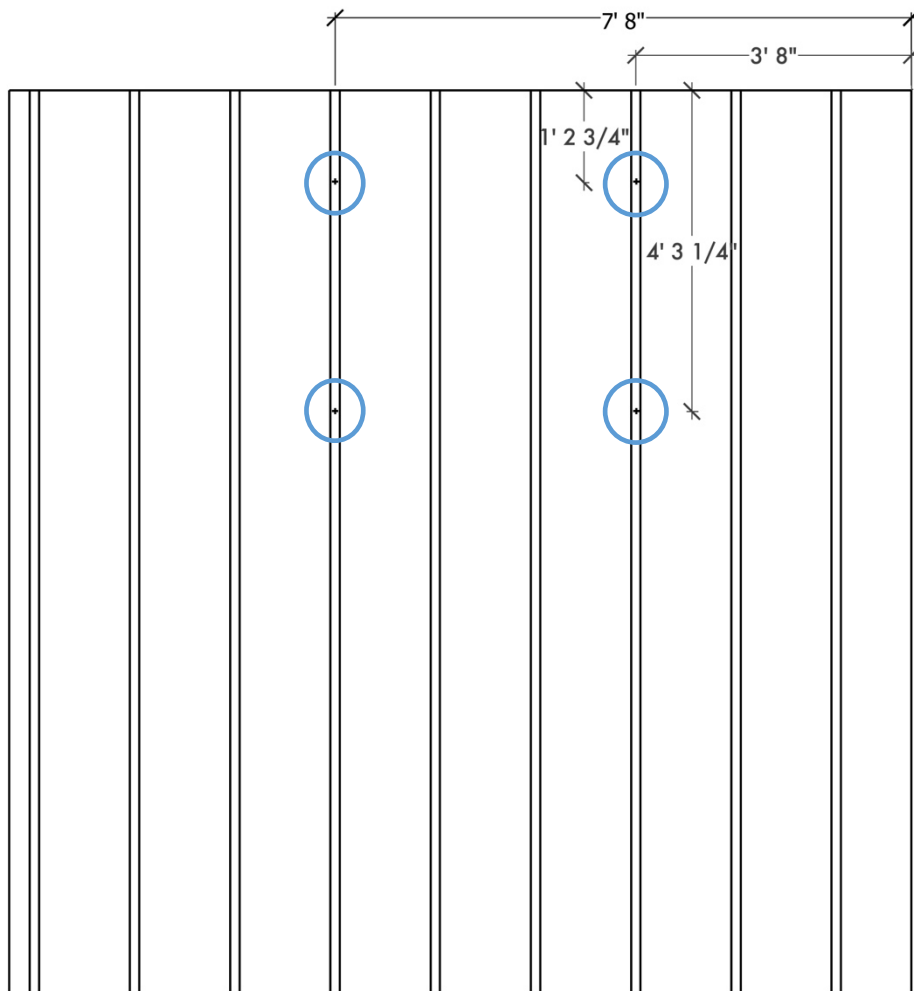$hsB = 9'' + 3'\ 6\ 1/4'' = 4'\ 3\ 1/4''$

fw = distance from front wall to front edge of cloud

esA = length from eye screw A to front edge of cloud

esB = length from eye screw B to front edge of cloud

hsA = length from hook screw A to front wall
hsB = length from hook screw B to front wall

Music City
Acoustics

step 8 – find ceiling hardware locations
(perpendicular studs)

c.   using your measurements from **a**. and **b**. add the hook locations to your sketch

Music City
Acoustics

hello!

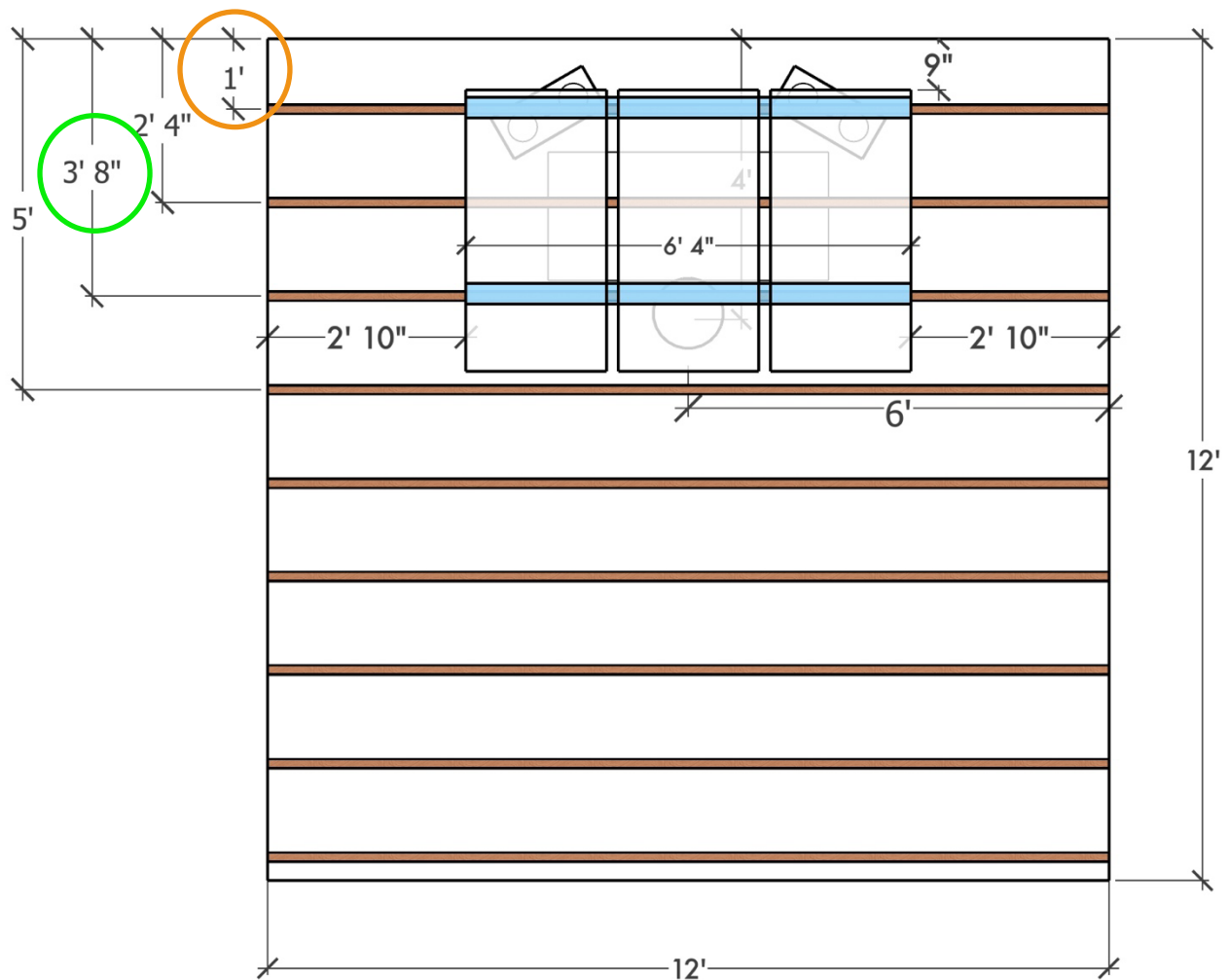## parallel stud sections 5 - 8

this install guide is now switching over to the parallel stud section for steps 5 through 8

Music City
**Acoustics**

step 5 – assemble the cloud (parallel studs)

a. referencing your drawing , determine which studs the cloud will be installed on. remember the 1x4s should be centered on the studs.

*use the studs closest to the front and back edge of your cloud to evenly distribute the weight. In the example sketch above, these are the studs 1' and 3' 8" from the front wall.

Music City
Acoustics

step 5 – assemble the cloud (parallel studs)

b. determine the locations for the 1x4 boards on your cloud


front wall

9"

1'

3' 8"
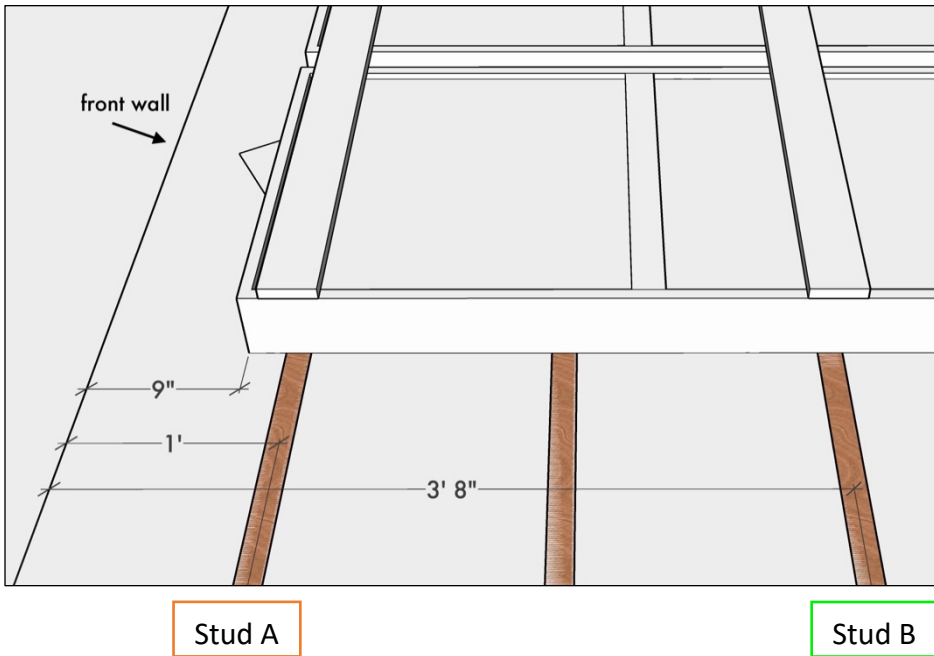
Stud A

Stud B

Stud **A**
$1' - 9'' = 3''$

Stud **B**
$3' 8'' - 9'' = 2' 11''$

equation explanation:

distance from front wall to stud A – distance from front wall to the edge of the cloud = distance from front edge of cloud to <u>center of 1x4</u>

distance from front wall to stud B – distance from front wall to the edge of the cloud = distance from front edge of cloud to <u>center of 1x4</u>

3"

2' 11"

9"

1'

3' 8"

Music City
Acoustics
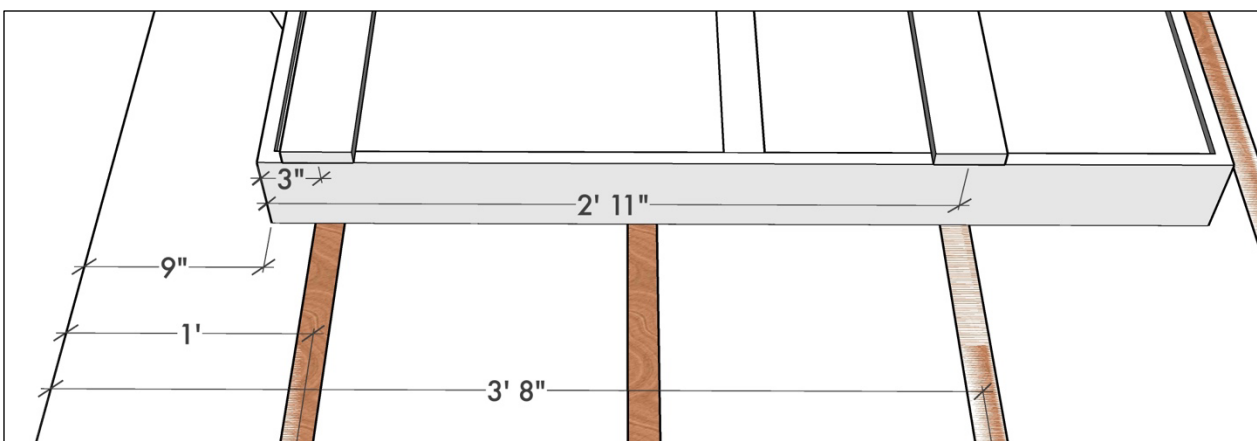
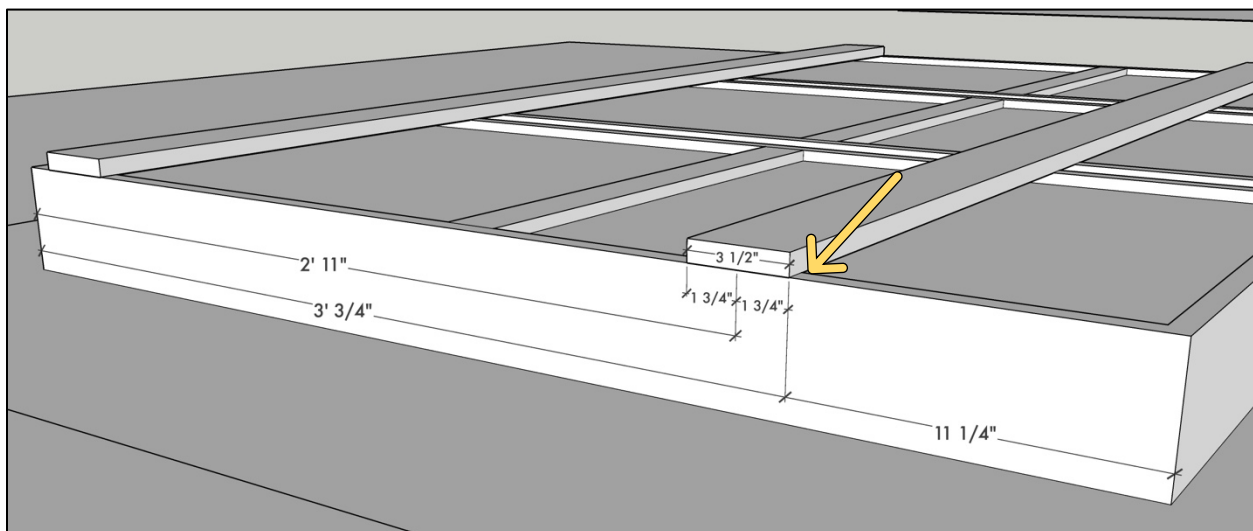# step 5 – assemble the cloud (parallel studs)

c. determine where to mark 1x4 locations to create visual guide
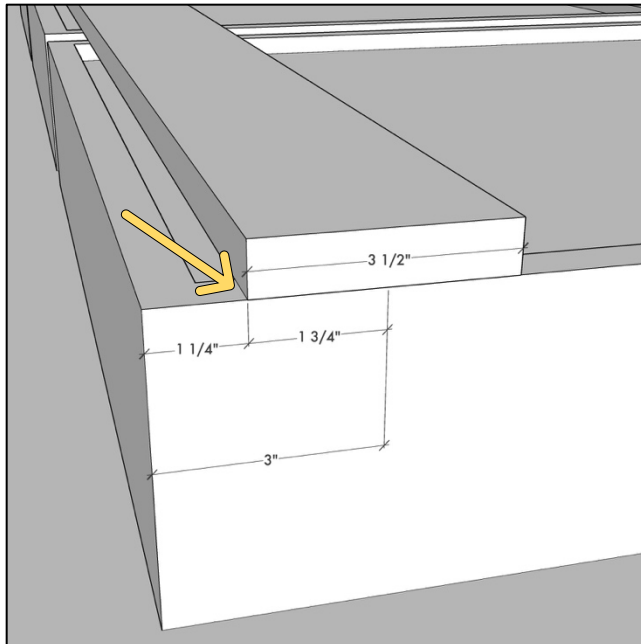
adjust your measurements from 5b. by 1.75"

this will align your mark with the edge of the 1x4s instead of the center allowing you to see the marks on the panels when assembling the cloud

*as you have probably already figured out,   1x4s are actually .75" x 3.5", thus the 1.75" adjustment

Music City
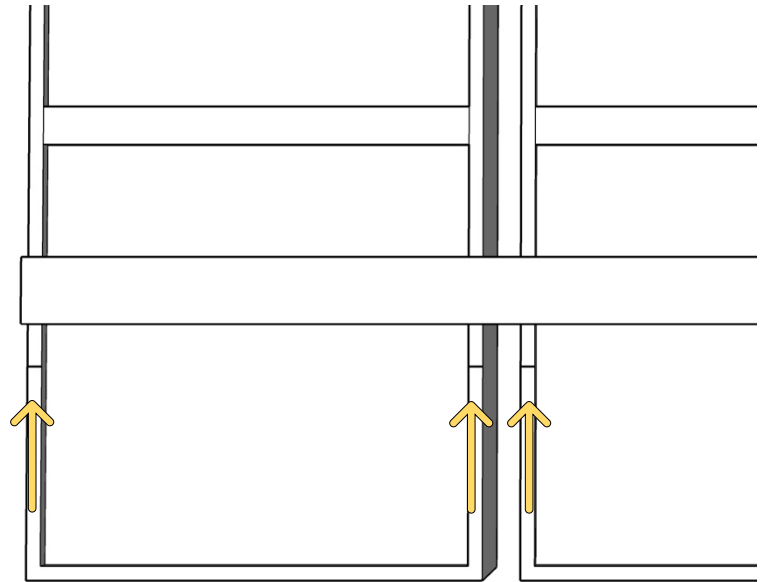Acoustics

step 5 – assemble the cloud (parallel studs)

d. lay the panels on the floor with the back side of the panels facing up (make sure the floor is clean)
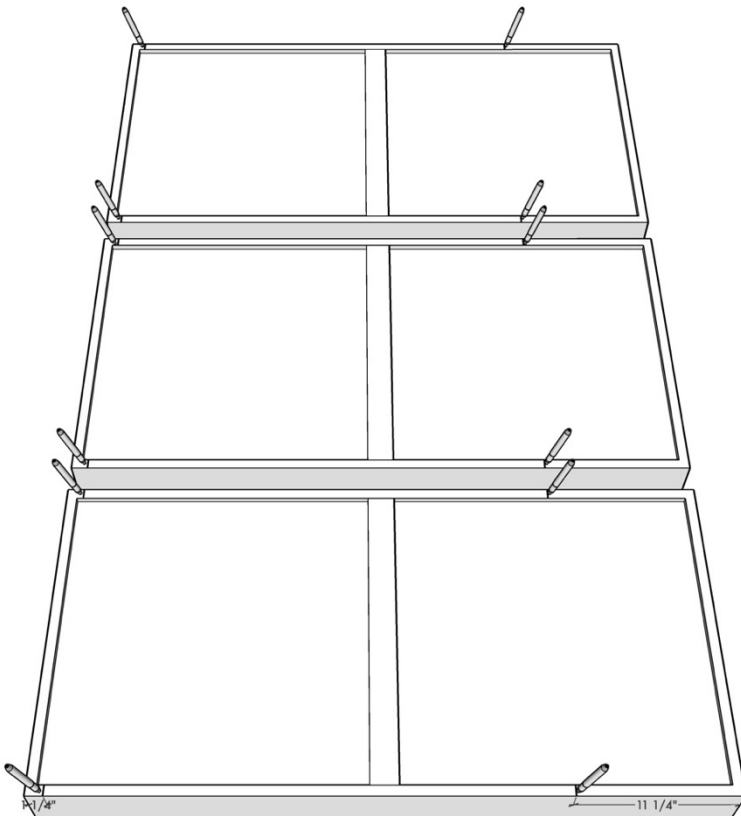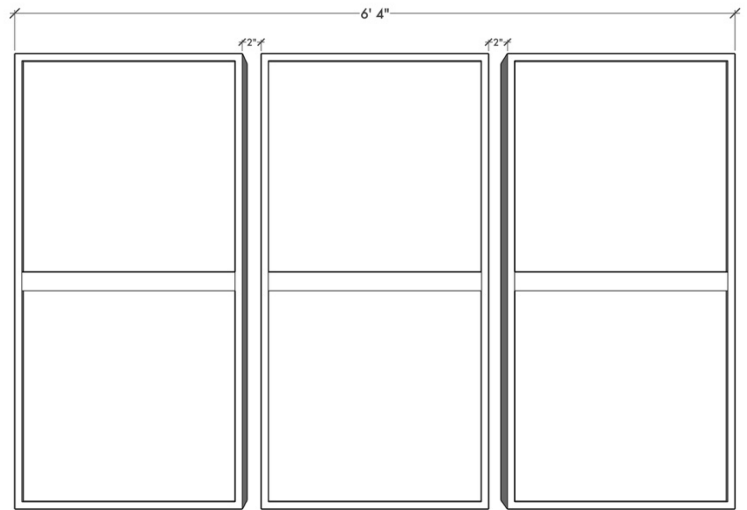
e. mark the panels on each side using the measurements calculated in step 5c.

Music City
Acoustics

step 5 – assemble the cloud (parallel studs)

f. line up the 1x4 boards with each mark

g. double check the alignment and spacing. your 1x4s are ready to be screwed down to the panels.
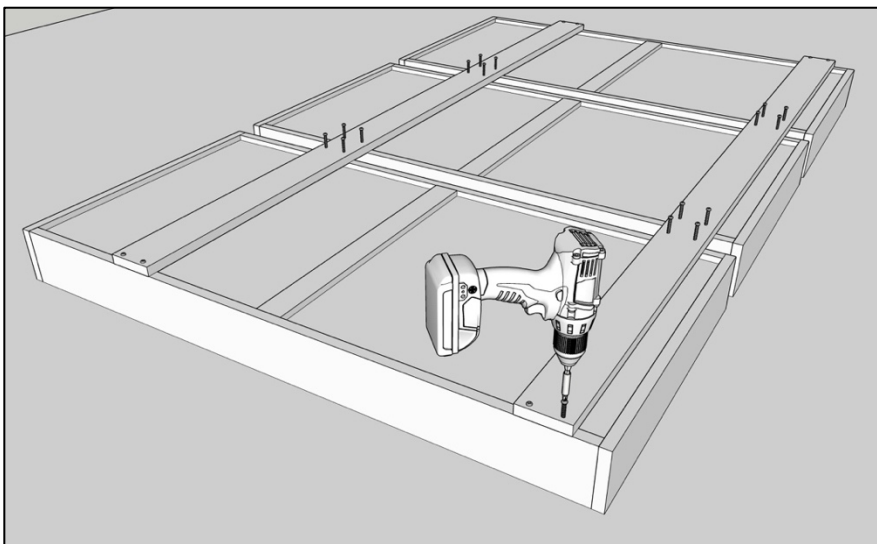
Music City **Acoustics**

step 5 – assemble the cloud (parallel studs)

h. using 1/8" drill bit, drill pilot holes

*start with outer edge of the panels to ensure proper alignment

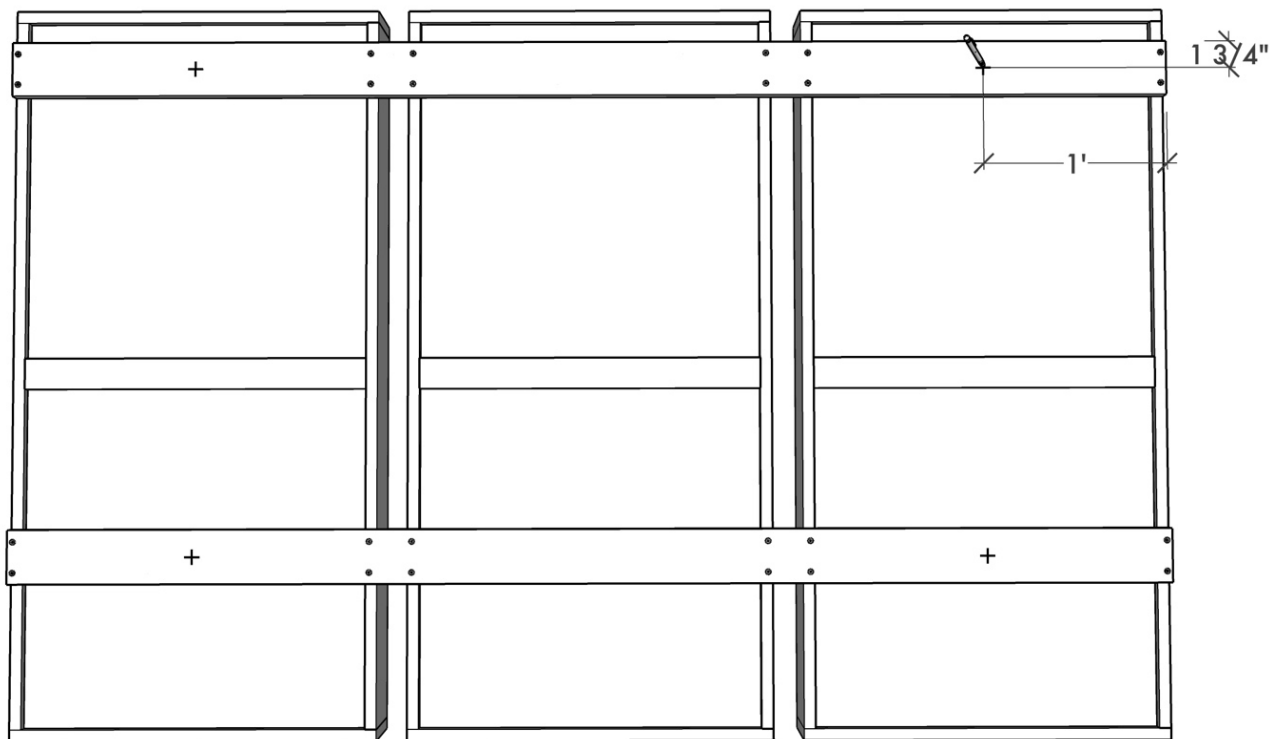### i. screw 1x4 boards to panels with 2" screws

*start with one screw on the outer edges of the cloud. screw in the middle panel last to ensure proper alignment

Music City
Acoustics

step 6 – attach eye screws to the cloud -
(parallel studs)

    j. mark eye screw locations on cloud

- 1' from the left and right side of the cloud
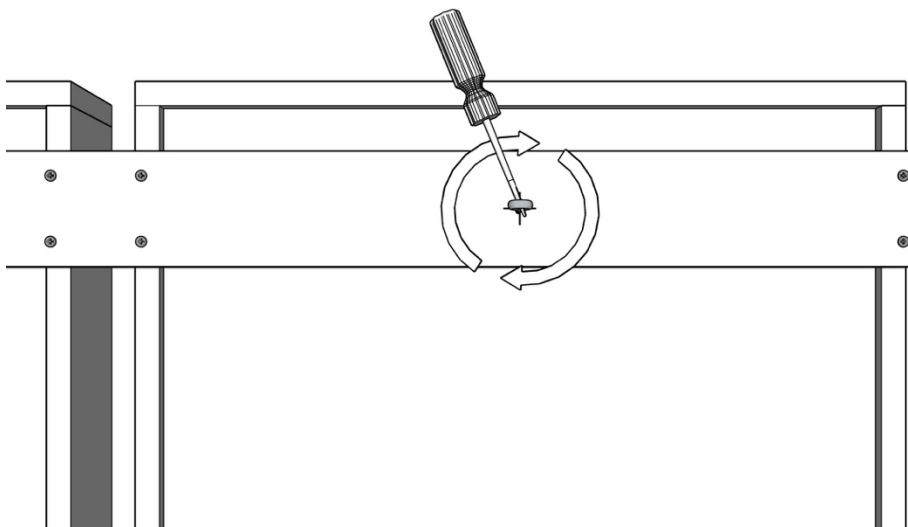
- centered on the 1x4s

*because the studs run parallel to the 1x4s the eye screws can go anywhere on the cloud. we recommend the above configuration for the best weight distribution.

Music City
Acoustics

step 6 – attach eye screws to the cloud cont.
(parallel studs)

k. using 1/8" drill bit,
   drill pilot holes for
   eye screws
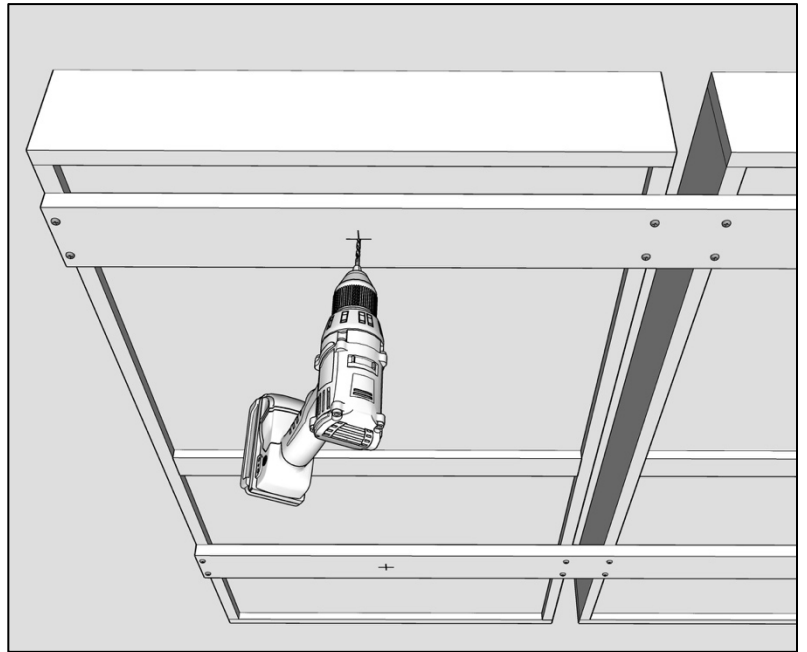
l. fasten eye screws to cloud

Music City
Acoustics

step 7 – find ceiling hardware locations –
(parallel studs)

m. referencing your drawing created in step 4, find the distance from the side walls to the edge of the cloud. we'll refer to this as wg

n. then add the distance from the edge of the cloud to the eye screws. from 6c. we know this should be 1'
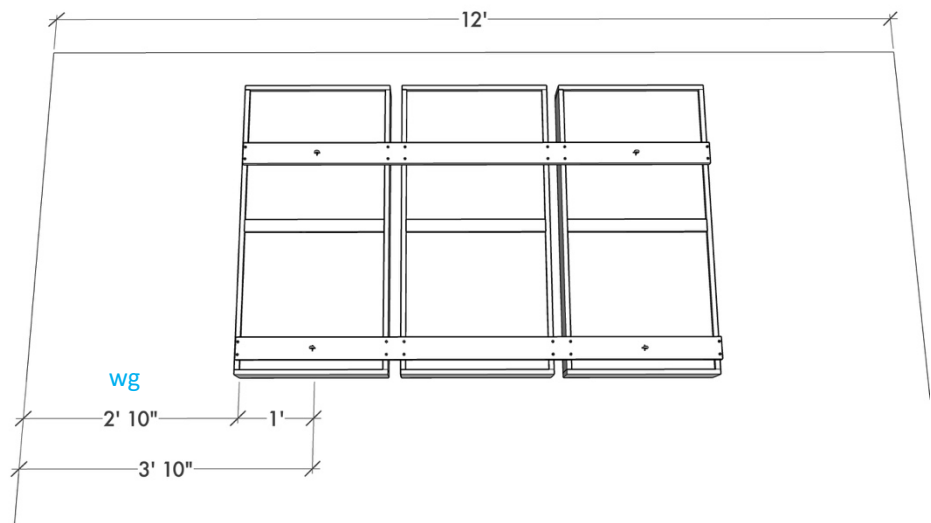
how to find wg (wall to panel gap) :

(room width – cloud width) ÷ 2 = wg

wg + eye screw offset = hook screw distance from side walls

*in most cases the cloud will be centered in the room so wg should be the same from the left and right walls

Music City
Acoustics

step 7 – find ceiling hardware locations cont.
(parallel studs)

o. the ceiling hook distance(s) from the front wall will be
determined by the stud locations in your room
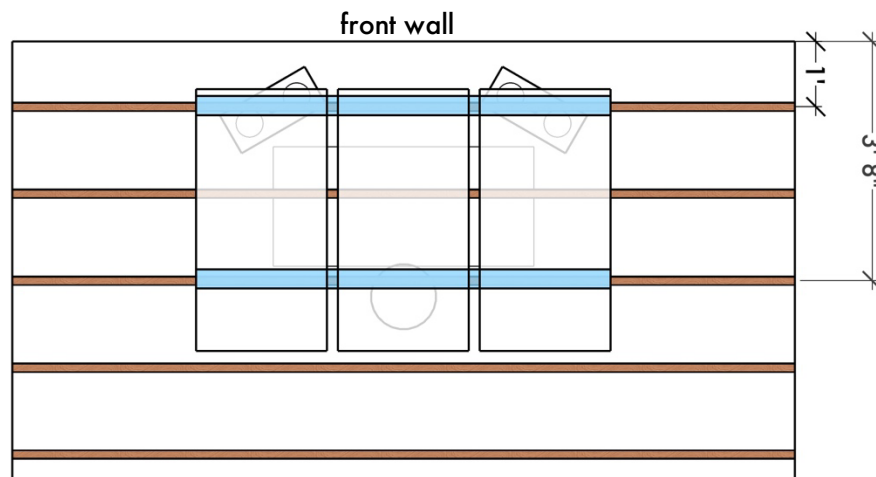
step 8 – ceiling hook location final layout <u>– parallel studs</u>
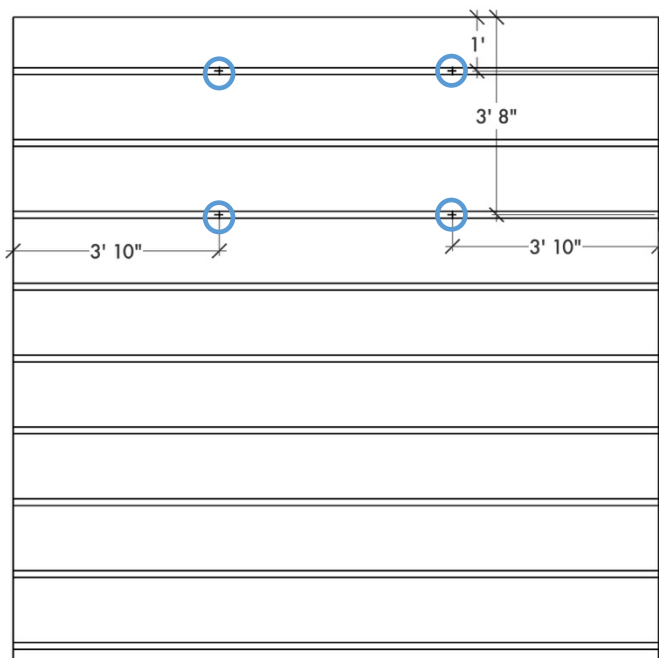
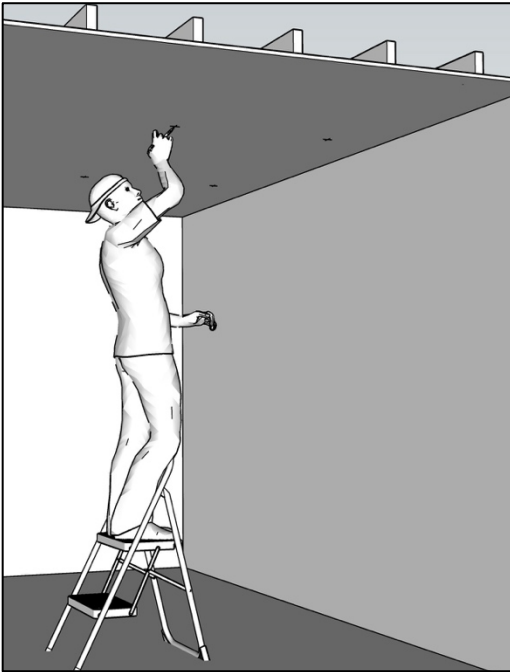a. using your results from step 7 sketch the hook locations
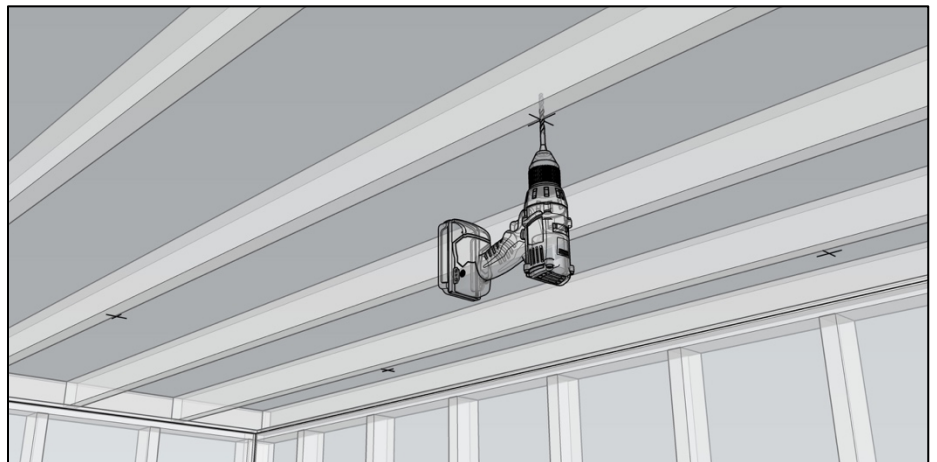
hello again!

continue for steps 9 - 12

the hard part is over!

Music City
Acoustics

step 9 – ceiling hardware

a. using <u>your </u>measurements from step 8, mark hook screw locations

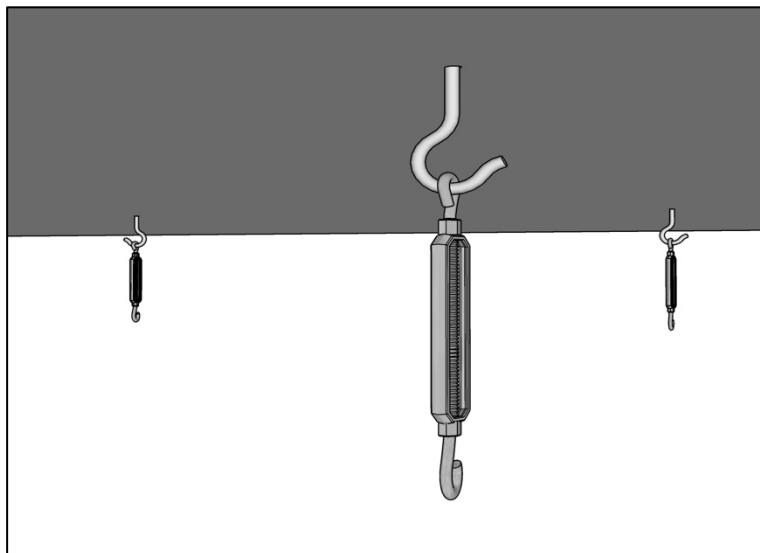
b. using 1/4" drill bit, drill pilot holes for hook screws

Music City
Acoustics

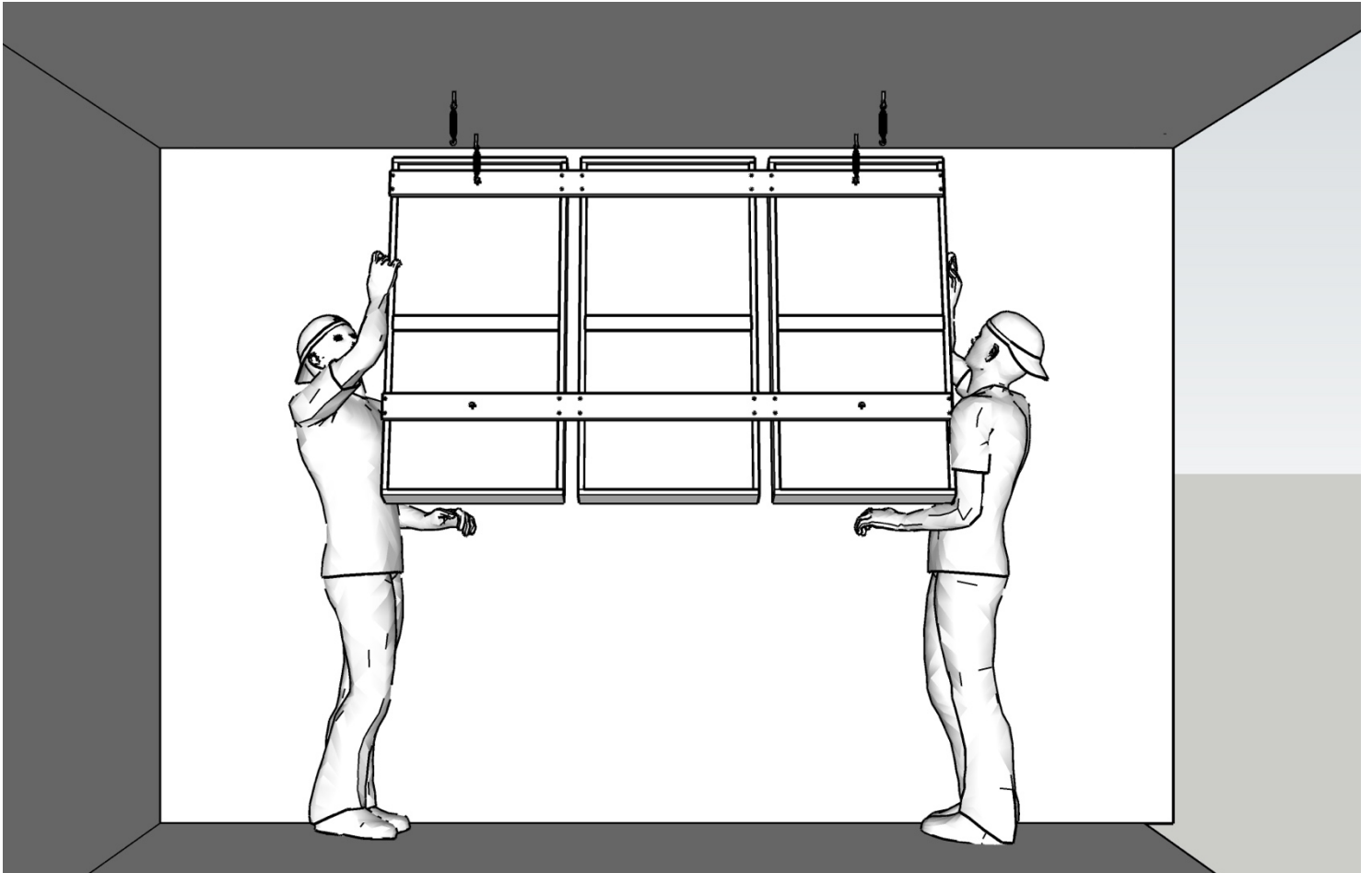# step 10 – attach hardware to the ceiling

a. fasten 1/4" hooks to the ceiling studs
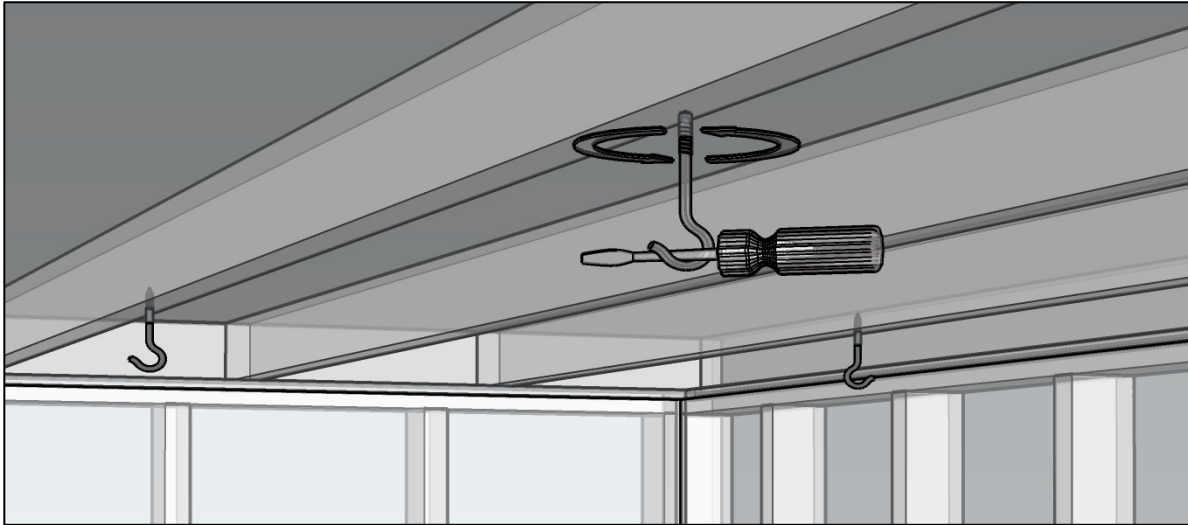
b. place turnbuckles on hooks

*attach turnbuckles with hook facing out. this will make hanging the panels 100x easier

Music City
Acoustics

step 11 – hang the cloud!

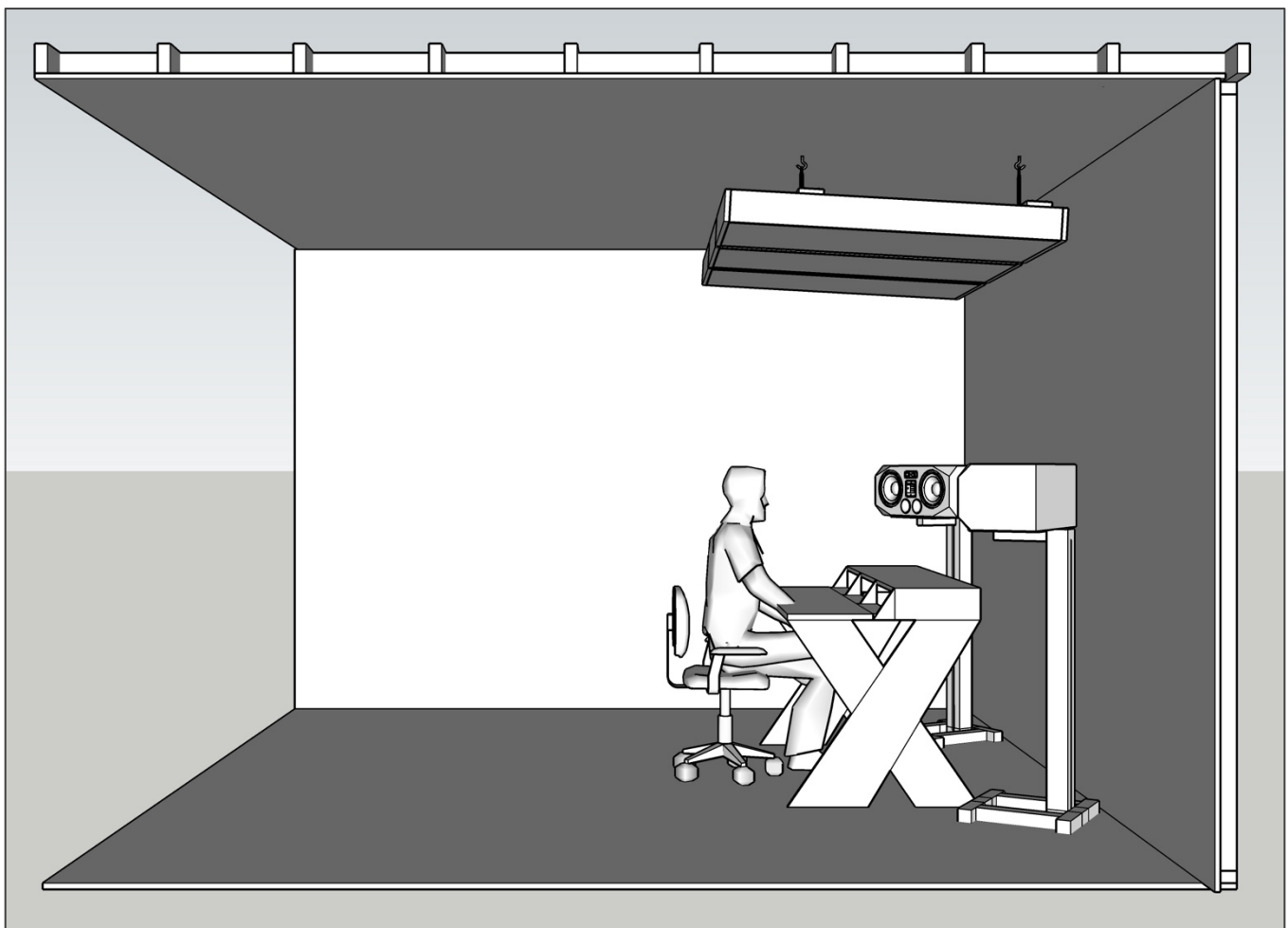a. with a friend lift the cloud up and onto the front two turnbuckles

Music City
Acoustics

step 11 – hang the cloud cont....

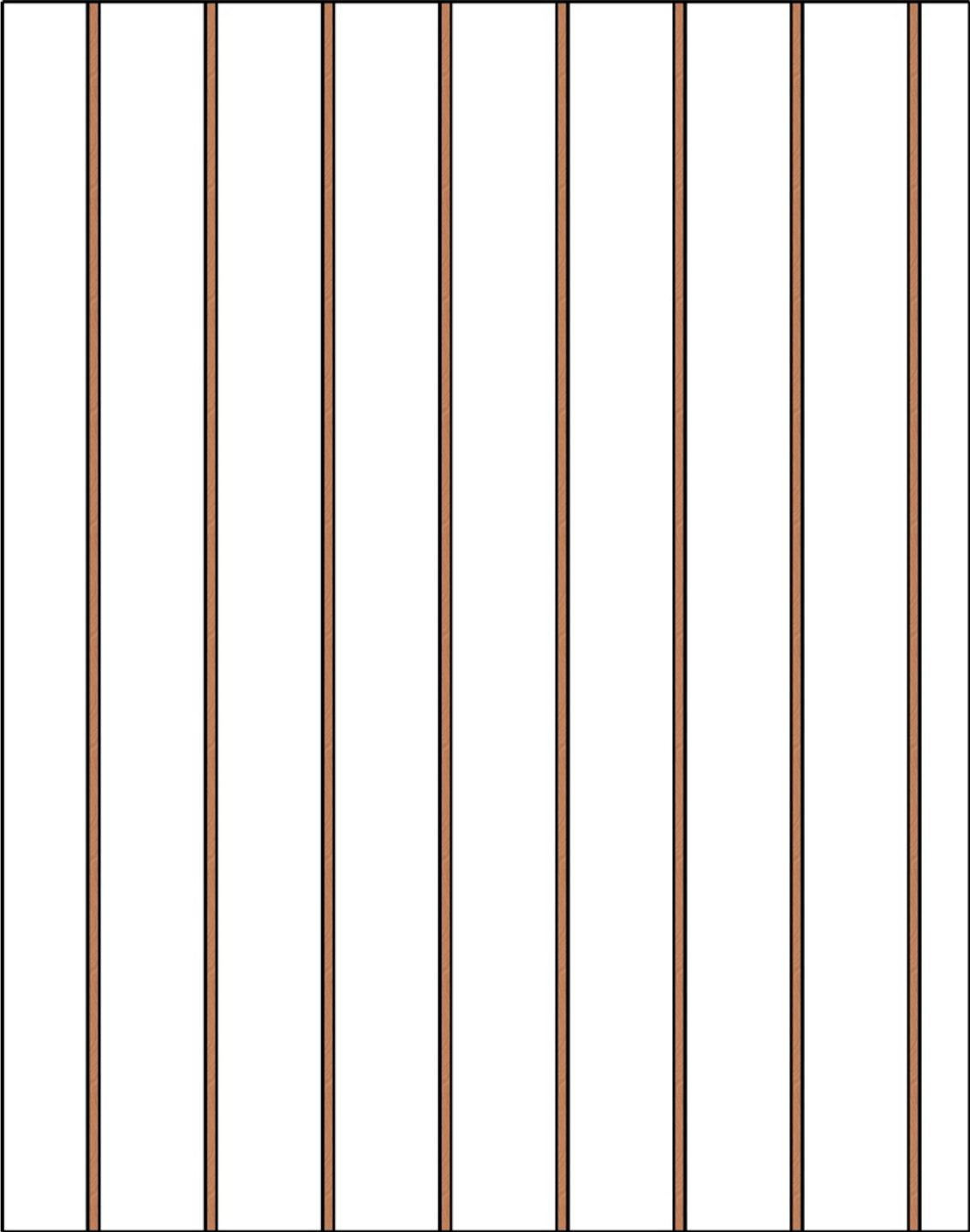b. continue to support the cloud and swing the back side of the cloud up and onto the other two turnbuckles
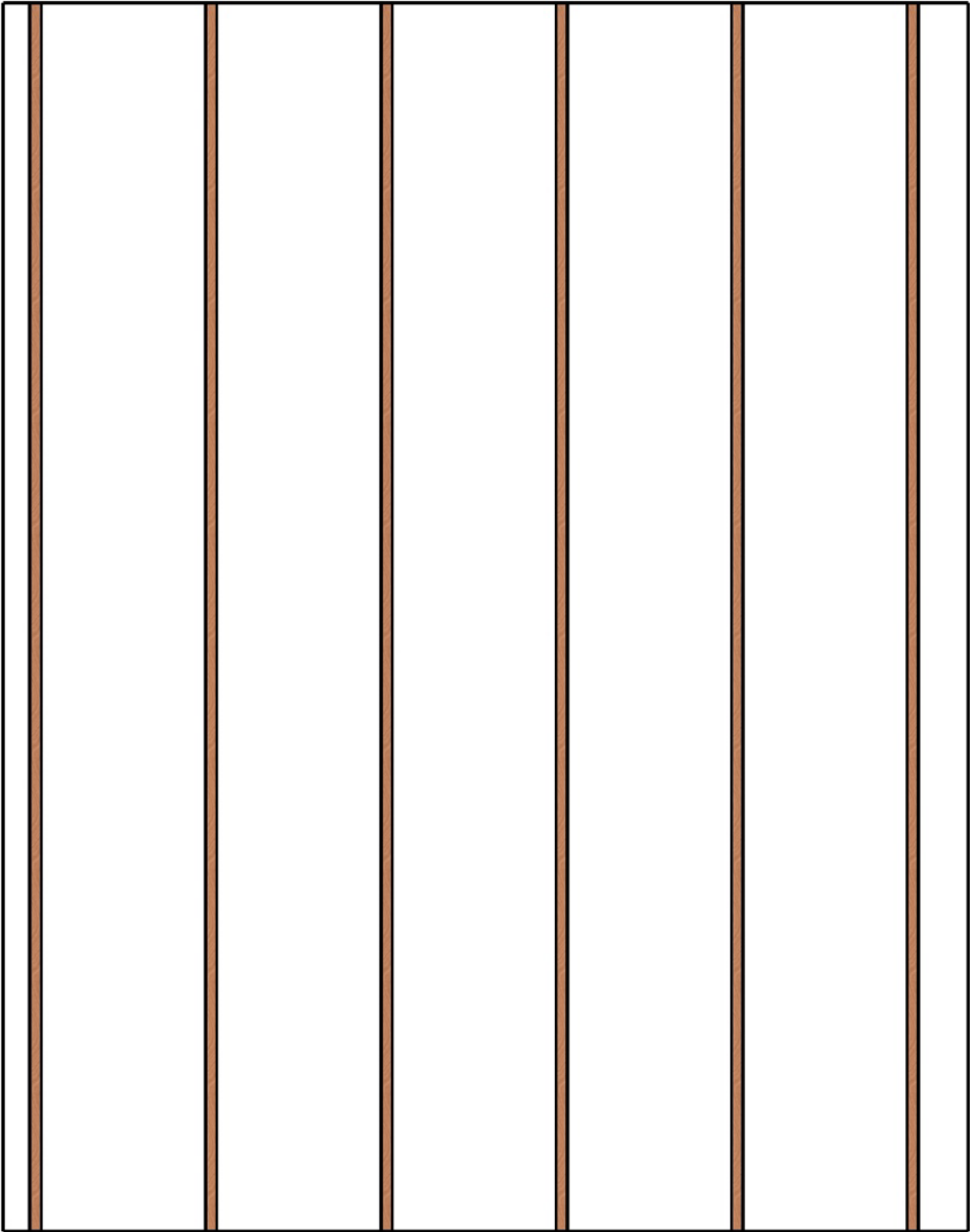
Music City
Acoustics
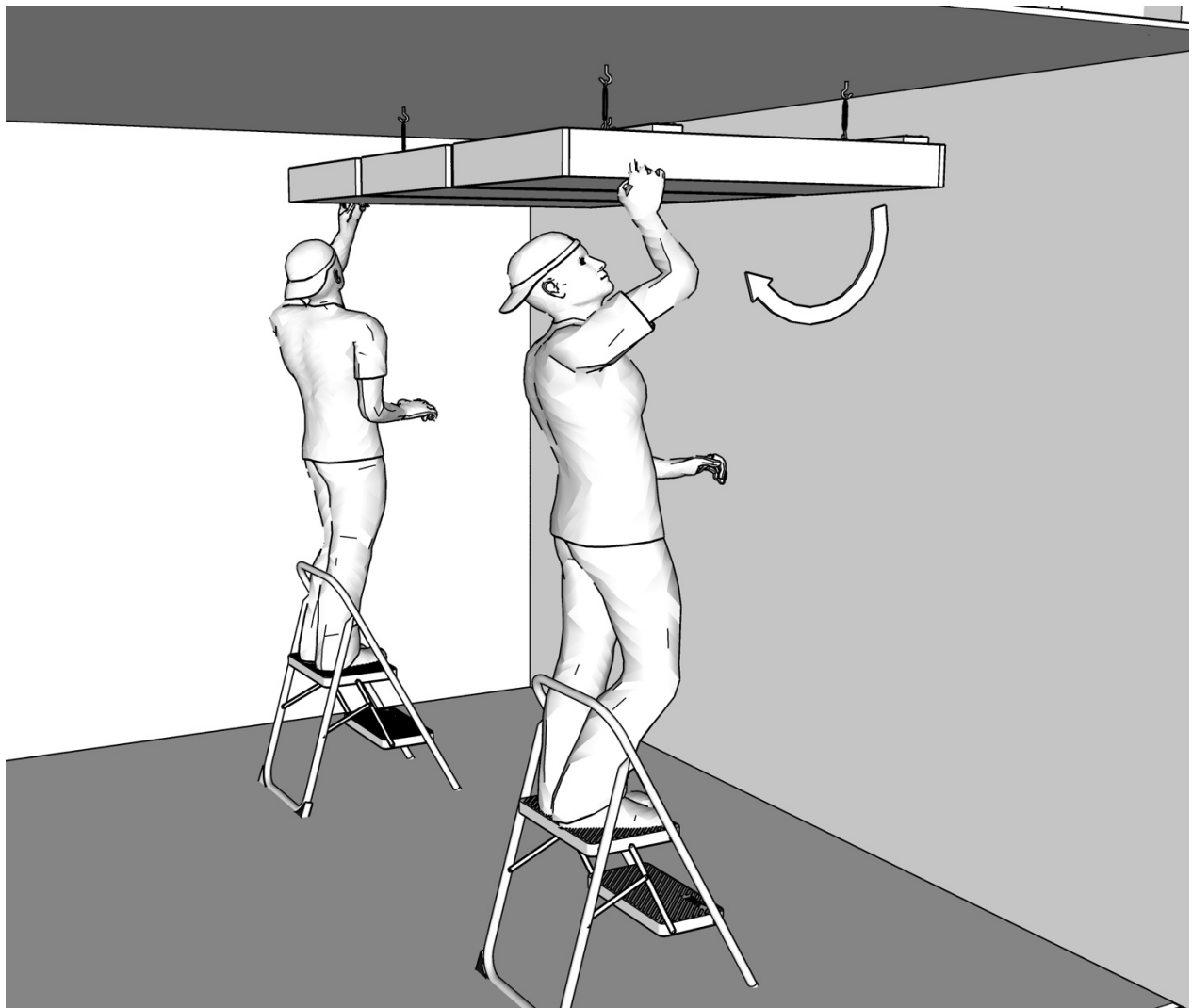
step 12 - level the cloud as desired

    c. using the turnbuckles level or angle the cloud

Music City
Acoustics

Music City
Acoustics

Music City
Acoustics
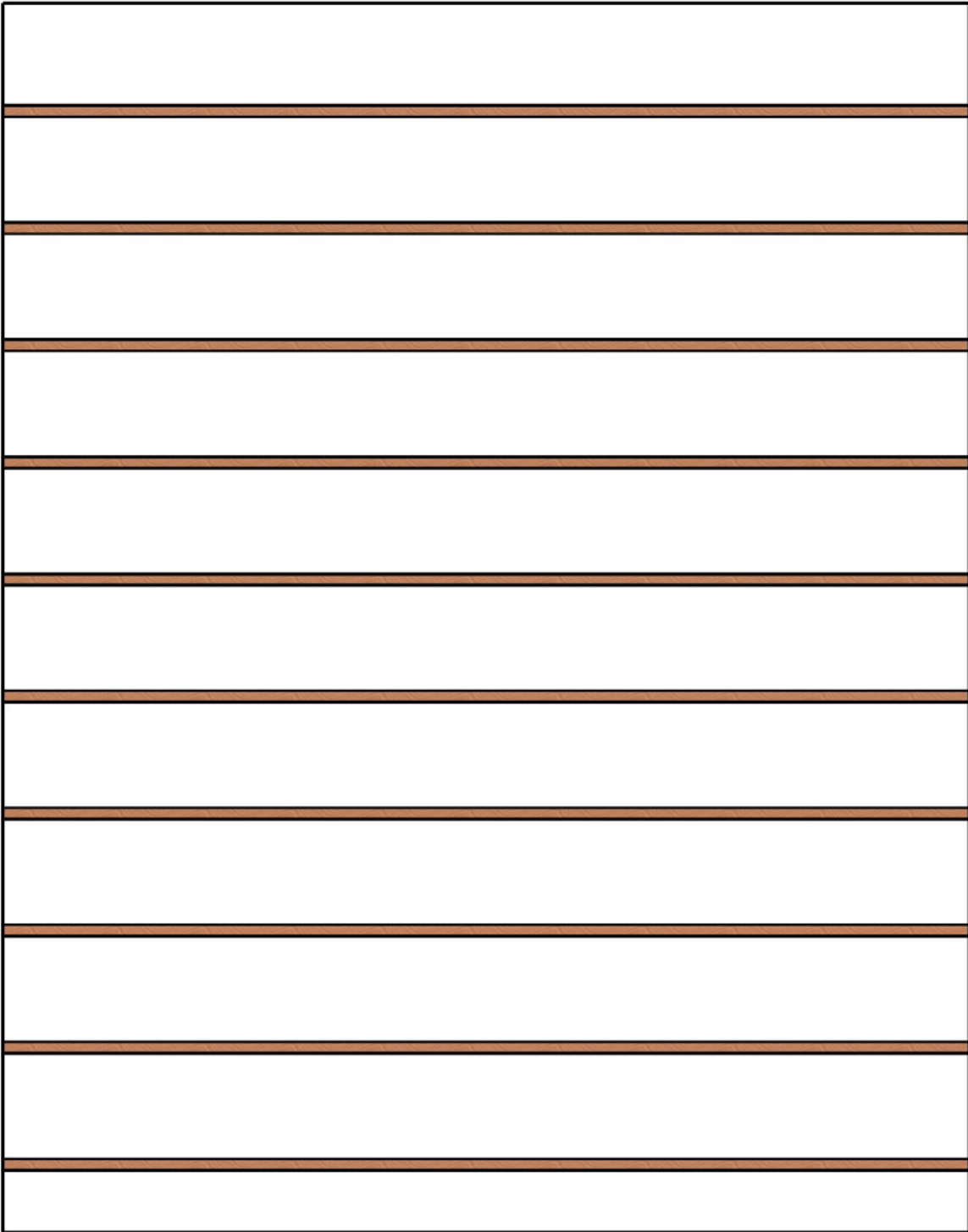
Music City
Acoustics

Music City
Acoustics

Congrats, you did it!

We'd love to see pictures of your newly updated studio. If you have any photos to share email them to
Graham@MusicCityAcoustics.com

Music City
Acoustics