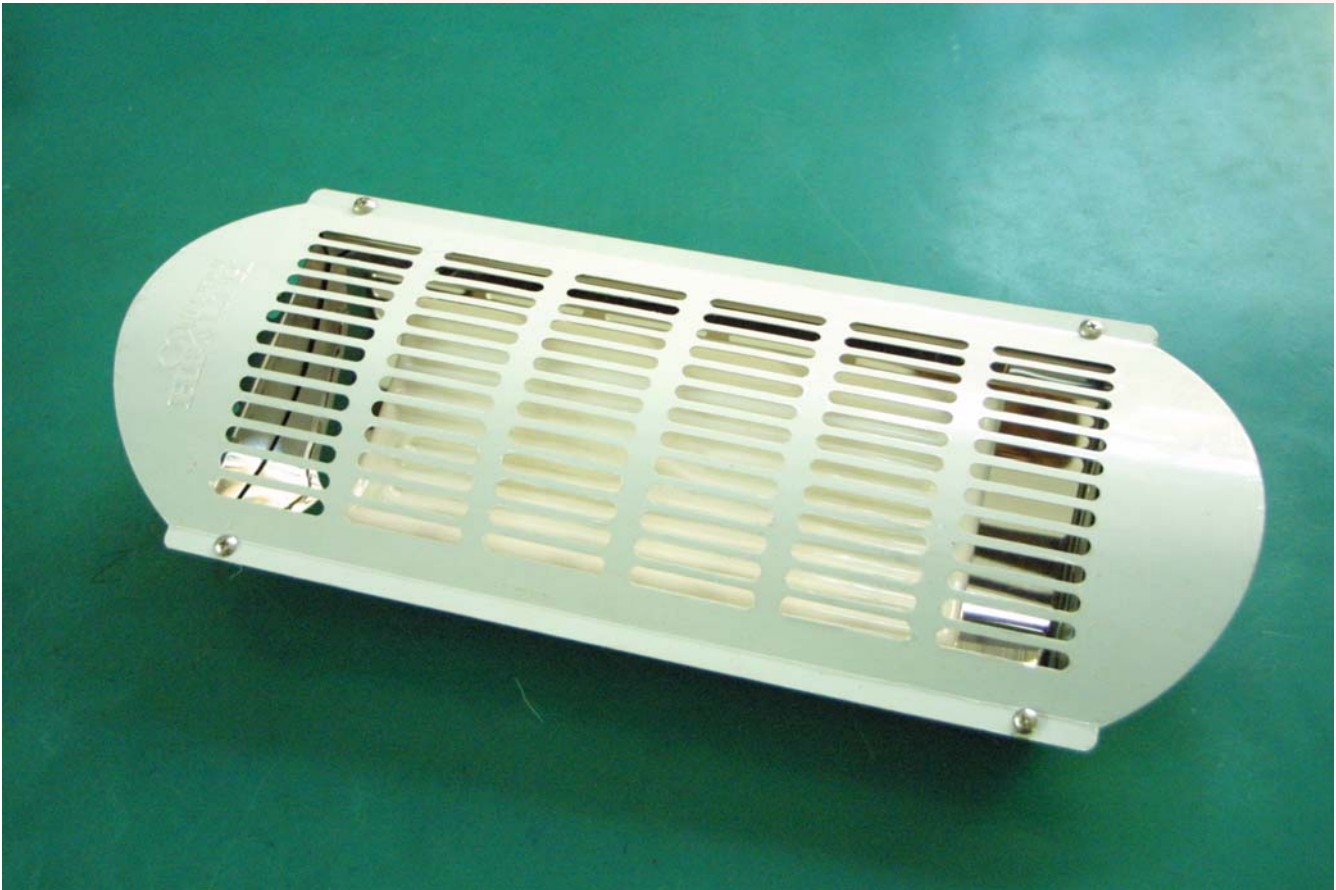


Owner's Manual and Installation Instructions



AMERICAN HEALTH INC.

375 WATT CERAMIC FAR INFRARED EMITTERS, AND
750 WATT CERAMIC MEDIUM WAVE INFRARED EMITTERS



INSTALLATION MANUAL

Always use a licensed electrician that is familiar with the installation of infrared emitters. American Health Inc. offers additional assistance to those unfamiliar with infrared saunas.

Thank You for purchasing American Health Brand Infrared Emitters. Safety is our # 1 concern. For this reason American Health Inc. uses only CE Certified ceramic that is manufactured in Europe under strict Quality Control.

WARNING: SOME PARTS OF THIS PRODUCT ARE EXTREMELY HOT. IMPROPER INSTALLATION MAY RESULT IN PERSONAL INJURY OR DAMAGE TO THE WOOD AROUND THE EMITTER.

Please contact us if you would like to know if there is an installer in your area that is familiar with the installation of infrared emitters. If you are an installer that is familiar with infrared emitter installation, please contact us so that we can help other customers in your area to find you later.

Preparing the area

- First cut a rectangle $5\frac{3}{4}$ "(15cm) wide by $13\frac{1}{4}$ " (33.7cm) high. The emitter will recess 2"(5.1cm) in depth so leave some extra room for wiring and high-temperature insulation. For hot air intake and escape, extend the bottom and top of the rectangle in a half-egg shape such that the center point is at least 8 cm above or below the rectangle. Cut the hole on the same curve as the top and bottom of the emitter shield.
- For additional air flow for 750 watt medium infrared emitters, also, use a spacer on both sides of the emitter to push the emitter slightly away from the wall. The thickness of this spacer should be 2.5cm or one inch. Failure to use this method could result in scorched wood, depending on the species, dryness and quality of the wood used in your sauna.

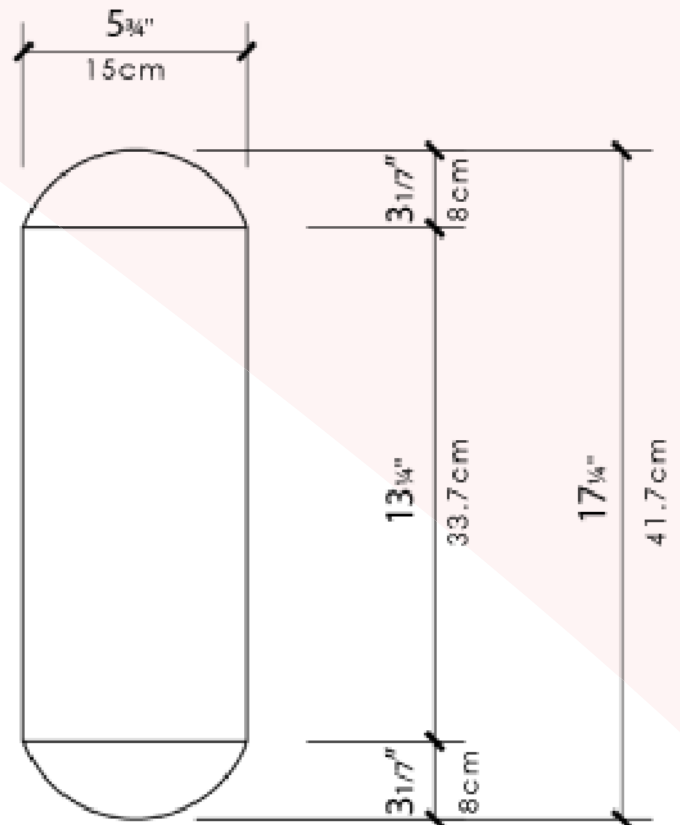


Image A-1



Image A-2

The cover shield is designed to cover the required ventilation holes.



Pre-wiring instructions

Always use a licensed electrician that is familiar with installing infrared emitters. Wire the emitters in parallel. Run a three wire cable from each IR emitter location to the central switch/relay location or directly to your electrical panel. Each emitter can run on a minimum 18-gauge wire.

High temperature wire (with ceramic rings) should be used inside the walls. Once the wire reaches the ceiling then PVC-insulated wire 90°Celsius-degree or special 200-degree wire will suffice.

The ground wire does not require ceramic heat-resisting rings.

Provide one ceramic connector or metal junction box for each emitter. Your local code and the advice of your certified electrician familiar with infrared emitter installation. To see if a metal junction box is also required,

Wiring instructions

- Always use a licensed electrician that is familiar with installing infrared emitters. Connect the ground wire first to the body of the emitter housing. You can connect it to any screw that touches the stainless steel metal housing.
- A ceramic connector can be used to connect the electrical wire from the source or relay to the wires attached to the emitter. When connecting the two wires from the emitter, tighten the screw from the ceramic connector such that the protective ceramic rings are pushed tightly against the back of the ceramic emitter itself, inside the housing. In other words, do not allow any slack in the ceramic rings. Their job is to prevent the conductor (bare wire) from touching the body of the emitter housing.



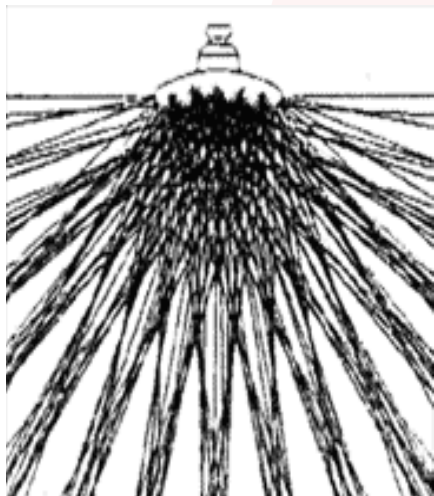
WARNING. IF THE CONDUCTOR TOUCHES THE STAINLESS STEEL HOUSING DURING OPERATION THEN A SHORT CIRCUIT WILL RESULT. IF THE UNIT IS NOT PROPERLY GROUNDED, THIS CAN CAUSE SERIOUS BODILY INJURY OR DEATH.

A metal junction box may be required in your local code but may be omitted if your local code and certified electrician agree that it is unnecessary.

Amperage and Wattage

- Each 375-watt (far infrared) emitter will draw a maximum of 3.5 amps at 110 volts or 1.71 amps at 220 volts. You must specify the voltage that you will use when ordering. Each 750-watt emitter will draw a maximum of 3.5 amps. According to the UL standard, 18-gauge wire is used for loads 7 amps or lower.

Radiant Emission Patterns of Ceramic Emitters



Engineered for optimal absorption. Infrared rays always travel in straight lines emanating at right angles to the emitter surface. The concave surface will emit a "concentrated" radiant pattern that is highly effective in a sauna because the sauna bathers will sit in a specific place inside the infrared "zone". In Plain English, American Health designed the shape of the ceramic in its emitters to create the perfect "sweet spot" in the sauna.

Infrared emitter temperatures and corresponding wavelengths

After the initial warm-up time of approximately seven minutes, the American Health emitters will produce roughly the following temperatures and wavelengths:

- 375-watt: Maximum temperature: 400 Celsius. Shortest wavelength: 4.3 microns.
- 750-watt: Maximum temperature: 560 Celsius. Shortest wavelength: 3.5 microns.

Infrared Temperature and Wavelength Table

The following table shows the peak wavelength that will be produced by ANY OBJECT at the given temperatures. The specific material of the emitter does not affect the wavelength. Surface temperature is the ONLY factor that determines peak wavelength. At any given temperature, there will be many wavelengths produced. This table only shows the most common.

F	Celsius	Kelvin (C + 273)	Wiens Constant	Microns
121.4	50	323	2898	8.972136223
166.4	75	348	2898	8.327586207
211.4	100	373	2898	7.769436997
256.4	125	398	2898	7.281407035
301.4	150	423	2898	6.85106383
346.4	175	448	2898	6.46875
391.4	200	473	2898	6.126849894
436.4	225	498	2898	5.819277108
481.4	250	523	2898	5.541108987
526.4	275	548	2898	5.288321168
571.4	300	573	2898	5.057591623
616.4	325	598	2898	4.846153846
661.4	350	623	2898	4.651685393
706.4	375	648	2898	4.472222222
751.4	400	673	2898	4.306092125
796.4	425	698	2898	4.151862464
841.4	450	723	2898	4.008298755
886.4	475	748	2898	3.874331551
931.4	500	773	2898	3.749029754
976.4	525	798	2898	3.631578947
1021.4	550	823	2898	3.52126367
1066.4	575	848	2898	3.41745283
1111.4	600	873	2898	3.319587629
1156.4	625	898	2898	3.227171492
1201.4	650	923	2898	3.139761647
1246.4	675	948	2898	3.056962025
1291.4	700	973	2898	2.978417266

Placing the emitter in your room

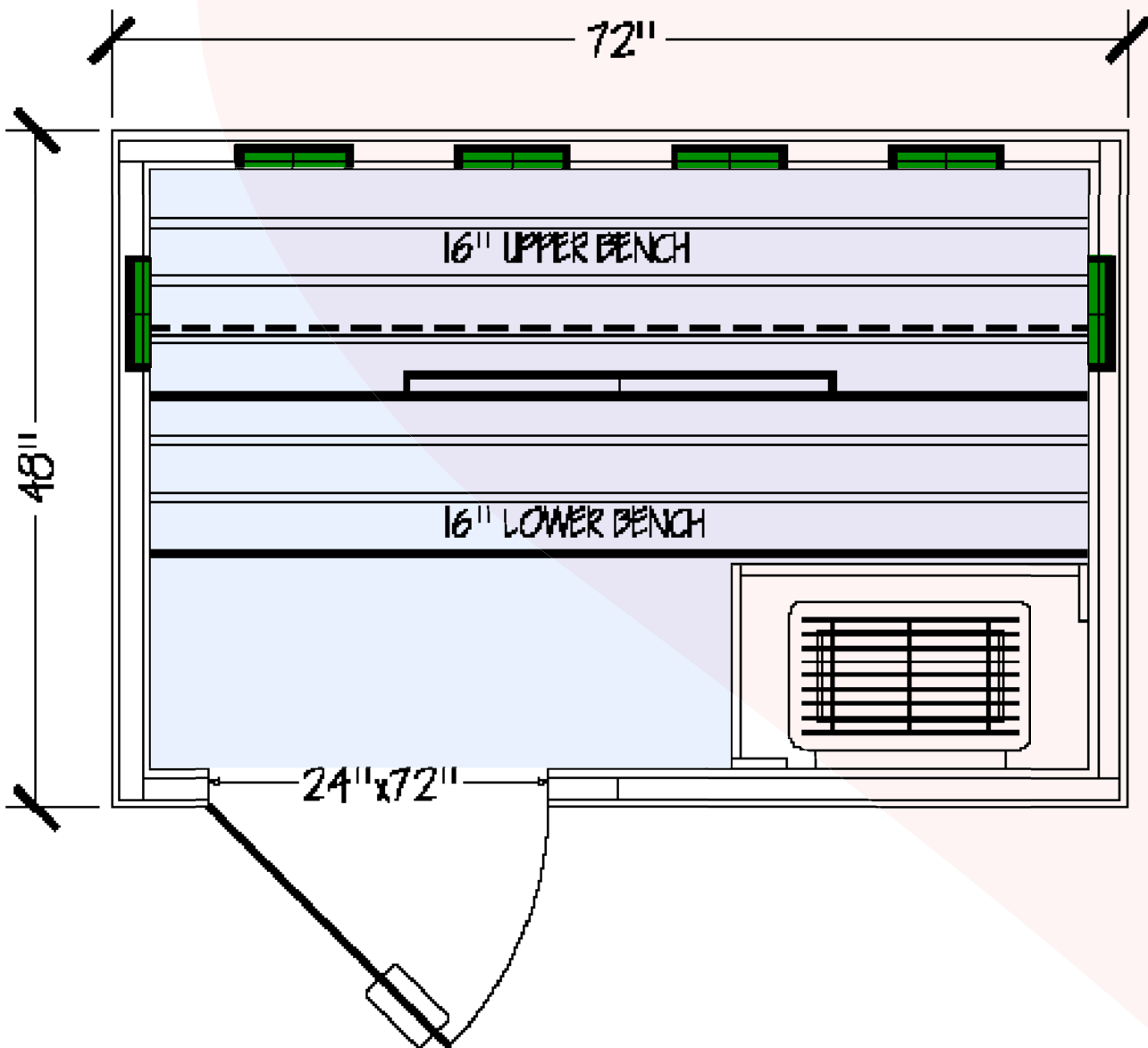
There is no specific formula that gives the number of emitters required for your installation. You should seek the advice of a professional that can help you to achieve your desired results without waste. In general you must attempt to maximize the absorption of infrared rays for every person that is in the infrared sauna room, so the emitters should be placed around the room aimed at the largest parts of your body first and foremost.

Infrared emitter

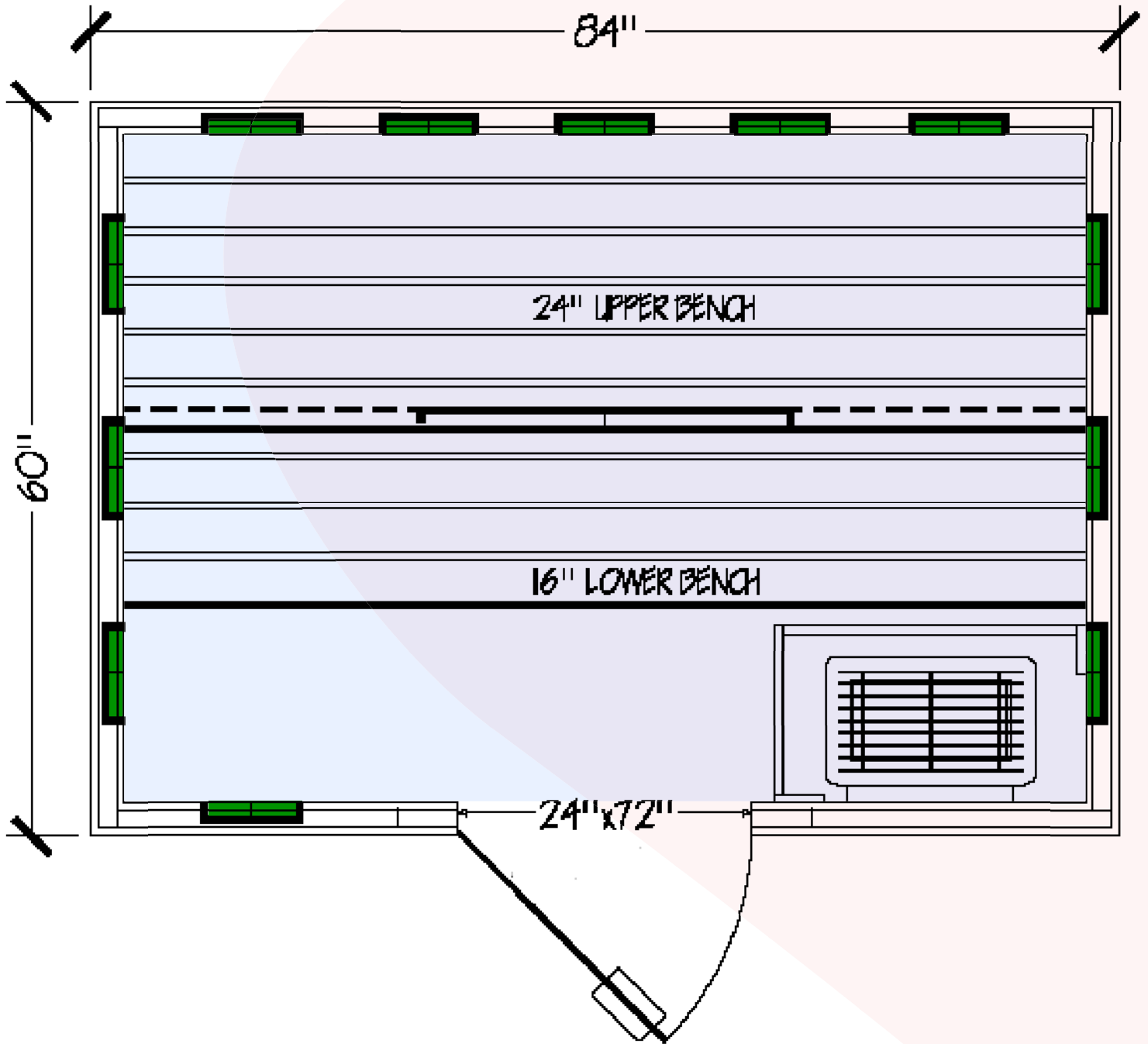
The emitters should be positioned so that they aim directly at your body from several angles. If more than one person will use the sauna at the same time, be careful not to position the emitters in such a way that one person will block the infrared rays from reaching the other person.

The following diagrams show some possible ways to position the infrared emitters in your sauna. Our experts can help you to design the most effective placement strategy for your infrared emitters for optimal absorption of the infrared rays.

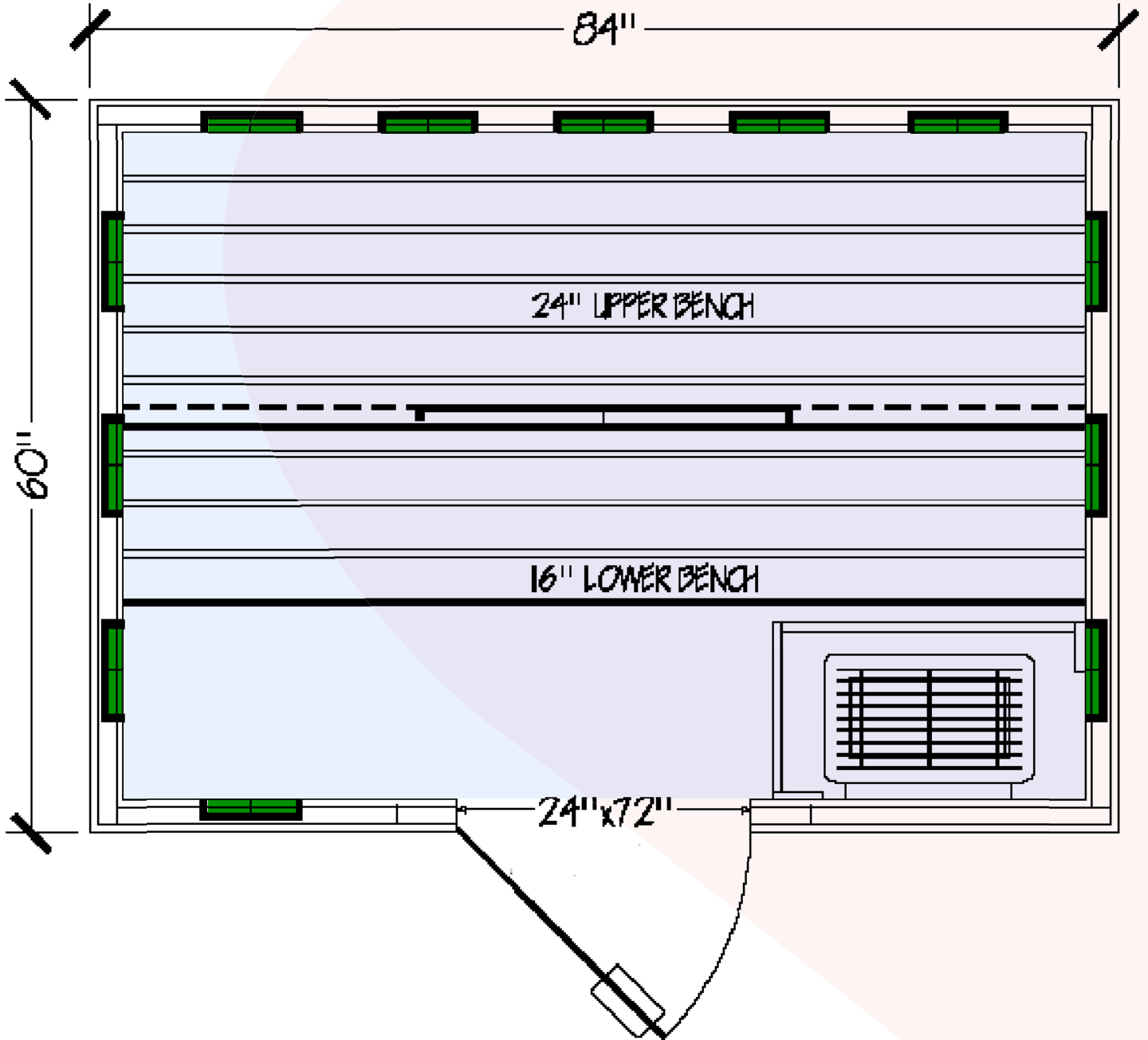
4x6 Dual Sauna



5x7 Dual Sauna



5x7 Dual Sauna



Installation of backrest

Although some parts of the emitters are cool to the touch during operation, other parts are very hot, so you should not touch the emitter during operation.

Install a backrest in front of any emitters that you will place in the wall behind or directly beside the bench. You can then lean against the backrest to avoid touching the hot emitter, and the backrest will hold you in the correct position for greatest comfort.

We recommend buying or building an ergonomic backrest backrest as shown in the following image. [image]

Or, you can build a simple backrest from at least four or five pieces of 1/2" x 1 1/2" boards that will go horizontally in front of the emitters.

The bracket for the backrest should be approximately 4-6 inches out from the wall so that you are not sitting too close to the emitters.

Sitting close to the emitters is generally not harmful but the intensity of the infrared rays may be uncomfortable u...uncomfortable until you move a few inches away.

