Infrared Sauna Series Models
IS 201, IS 202, IS 301, IS 302, IS 401, IS 402, IS 601, and IS 602 with "SaunaLogic IS" Control Panel and CB PK-5 Box (here after referenced as SaunaLogic IS and CB PK Box)

Read all instructions carefully before installation. Please leave all instructions and warranty with the owner.

WARNING
Prolonged exposure to elevated temperatures is capable of inducing hyperthermia. Hyperthermia occurs when the internal temperature of the body reaches several degrees above the normal body temperature of 98.6°F. The symptoms of hyperthermia include an increase in the normal temperature of the body, dizziness, lethargy, drowsiness, and fainting. The effects of the hyperthermia include failure to perceive heat, failure to recognize the need to exit the room, unawareness of impending hazard, fetal damage in pregnant women, physical inability to exit the room and unconsciousness.

WARNING
The use of alcohol, drugs, or medication is capable of greatly increasing the risk of fatal hyperthermia.

SECTION 1: GENERAL INFORMATION

The system is ETL approved for permanent installations and electrical connections. All wiring must be performed in accordance with national and local codes. See Diagram 2 for wire and room size requirements. These heaters are wall mounted.

WARNING

Do not take a sauna if using alcohol, drugs or medications.

Pregnant women or persons with poor health should consult their physician before using any sauna.

Caution fire hazard: Do not use the sauna room for drying clothes, bathing suits, etc. Do not hang towels above heater. If any darkening of the wall around the heater is noticed discontinue sauna use immediately.
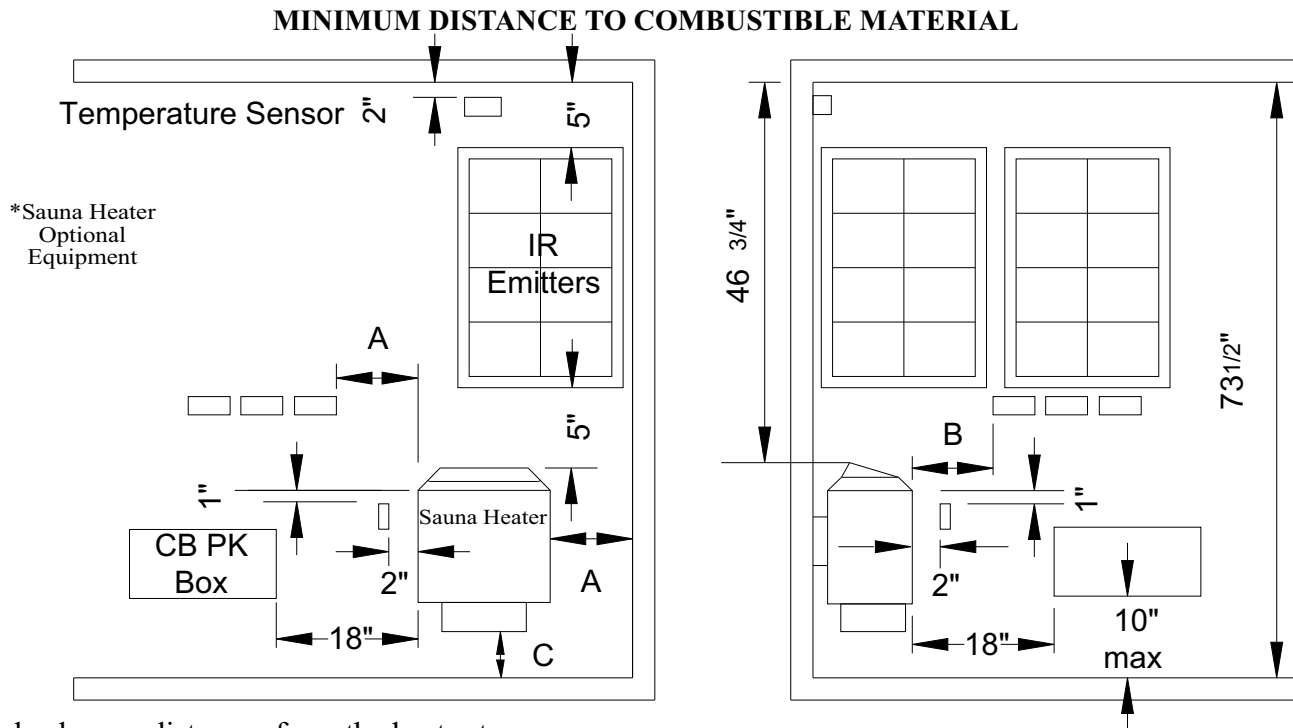
Inspect sauna regularly for required maintenance to heater, control and benches. Replace wood surfaces which show any signs of deterioration.

The heater gets hot during operation and should not be touched or burns may result.

Minors should be adequately supervised whenever near a hot or warming sauna.

DIAGRAM 1

MINIMUM DISTANCE TO COMBUSTIBLE MATERIAL

Recheck your distances from the heater to combustible materials to be sure you have the proper minimum distances.

⚠ **OBSERVING MINIMUM DISTANCES IS REQUIRED TO REDUCE FIRE HAZARD**

DIAGRAM 2

MODEL	IR kW	Sauna kW	* Optional Traditional Heater	MINIMUM ROOM			MAXIMUM ROOM		PHASE	VAC	IR AMPS	WIRE SIZE		
				Floor Area	Ceiling Height	Volume Cu.Ft.	Ceiling Height	Volume Cu.Ft.				Power Supply to CB PK-5	CB PK-5 to IR Heating Panels	CB PK-5 to Tradional Heater
IS-201/202	1.6	3.0	Junior 3.0	12 sq. ft.	73 1/2"	100	96"	150	1	240	6.5	2 #12AWG+GR	2 #14AWG+GR	2 #12AWG+GR
IS-301/302	2.0	4.5	Viki 4.5	16 sq. ft.	73 1/2"	135	96"	200	1	240	8.3	2 #10AWG+GR	2 #14AWG+GR	2 #10AWG+GR
IS-401/402	2.3	6.0	Viki 6.0	21 sq. ft.	73 1/2"	175	96"	300	1	240	9.6	2 #10AWG+GR	2 #14AWG+GR	2 #10AWG+GR
IS-601/602	3.0	8.0	Viki 8.0	31 sq. ft.	73 1/2"	250	96"	425	1	240	12.3	2 #8AWG+GR	2 #14AWG+GR	2 #8AWG+GR

* Denotes an optional traditional sauna heater may be added to the system. Refer to Installation and Operation manual for installation questions.

All installation and service to this equipment should be performed by qualified licensed personnel in accordance with local and national codes.

IR Heating Panel Quantities			
MODEL	IR-325-240	IR-160-240	IR-110-240
IS-201	4	1	1
IS-301	5	1	2
IS-401	6	1	2
IS-601	8	1	2

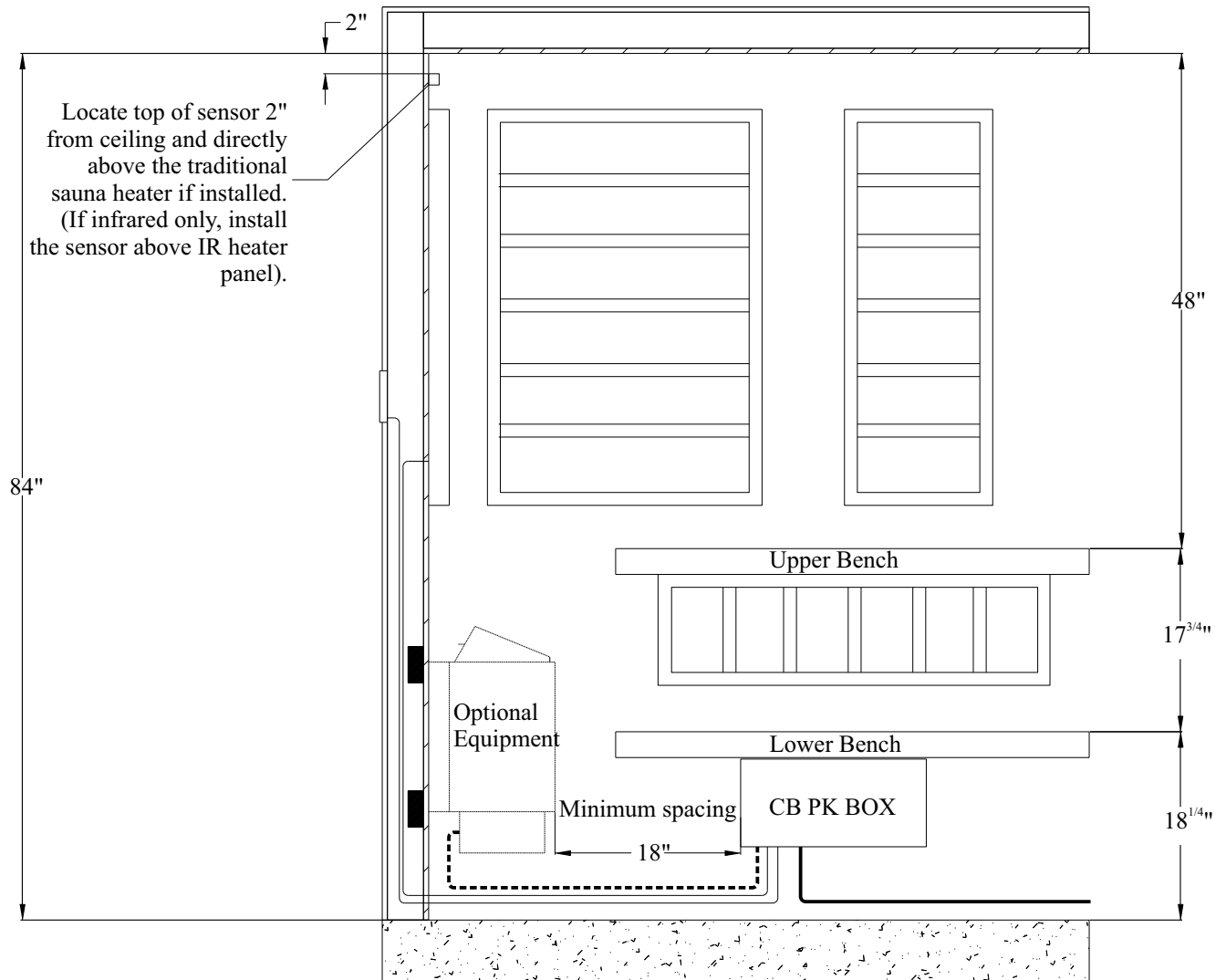| IR Heating Panel Quantities			
MODEL	IR-325-240	IR-160-240	IR-110-240
IS-202	3	3	1
IS-302	4	3	2
IS-402	5	3	2
IS-602	7	3	2

NOTE: A GFCI (Ground Fault Interrupt Circuit) device is not required by NEC. A GFCI may be installed if required by local codes but will nuisance trip during use of the product.
- CAUTION: Loose wire connections can cause heat damage to wires, terminal blocks and other components and may void the warranty.

DIAGRAM 3

Typical IS Installation with a traditional sauna heater
Refer to Diagram 1 for minimum spacing requirements.

2"

Locate top of sensor 2" from ceiling and directly above the traditional sauna heater if installed. (If infrared only, install the sensor above IR heater panel).

48"

84"

Upper Bench

$17^{3/4}$"

Optional Equipment

Lower Bench

Minimum spacing

CB PK BOX

18"

$18^{1/4}$"

CB PK Box can be outside of the sauna room or installed inside sauna room.

DIAGRAM 4

DIAGRAM 5

SaunaLogic IS Control

saunalogic)
by TyloHelo

°C
°F

Back of sensor

Insert screwdriver tip here to unsnap sensor cover from sensor.
Note vertical orientation of cover before removing.
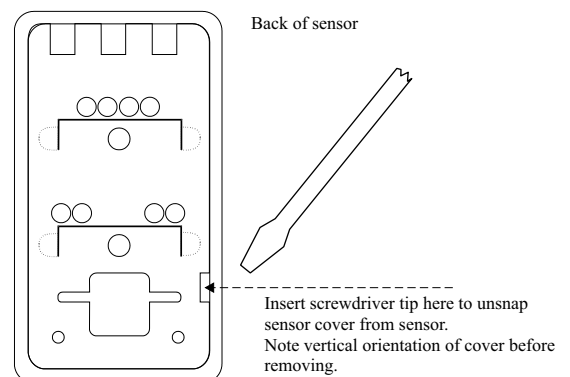
DIAGRAM 6

Recessed Mounted IR Heating Assembly Information

28 1/4"

40"

IR-325-240-R

27"

39 3/8"

ROUGH OPENING

16"

40"

IR-160-240-R

14 3/4"

39 3/8"

ROUGH OPENING

39 3/8"

ROUGH OPENING

11 1/2"

40"

12 3/8"

IR-110-240-R
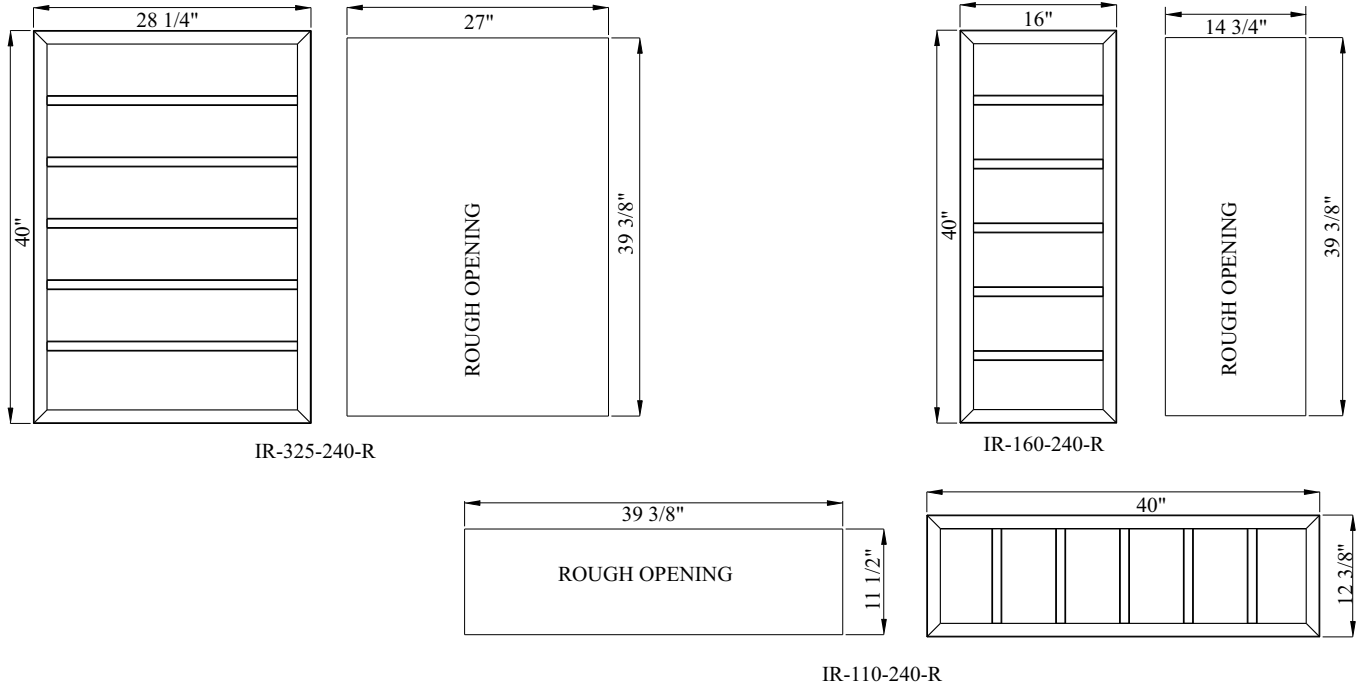
Surface Mounted IR Heating Assembly Information

26 5/8"

38 3/8"

IR-325-240-S

14 3/8"

38 3/8"

IR-160-240-S

38 3/8"

10 3/4"

IR-110-240-S
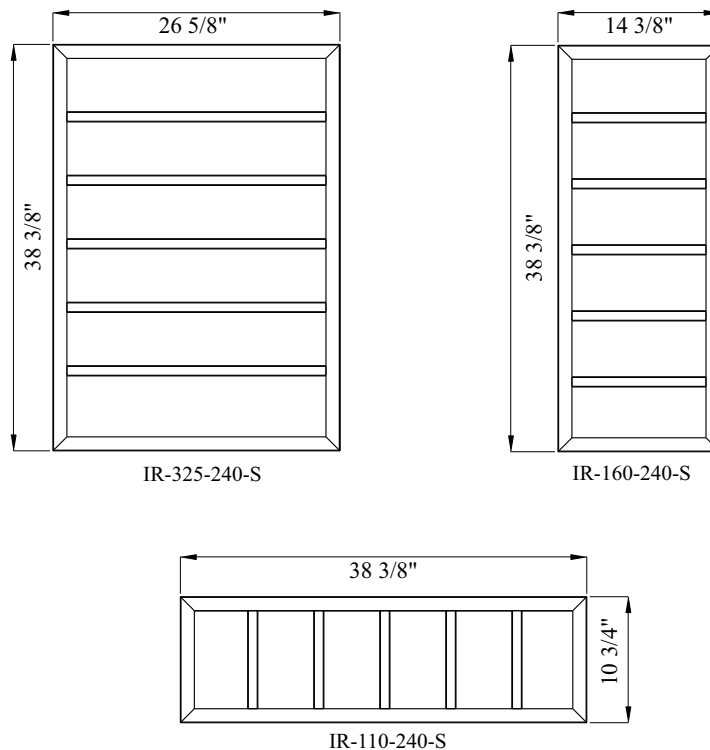
DIAGRAM 7

WIRING DIAGRAM: CONTROL AND HEATER MODELS
Junior 3.0 (1517-30-02) SaunaLogic IS and CB PK Box

Junior Heater   1517-30-02

(Optional Equipment)

Back Element

Front Element

1 2

T1 T2 GND

IR Emitters

IR Emitters

To next IR Emitter

SaunaLogic IS
Control Panel

Sensor

T1 T2 GND GND IR1 IR2

IR Emitter Quantities			
	IR 325-240	IR 160-240	IR 110-240
IS-201	4	1	1
IS-202	3	3	1

Interior Lights

Exterior Lights

Color Therapy

JT2 JT1 JT1 3

Inter_Light

Exter_Light

Color Lamp

F1 5A F2 5A

K5 K4 K6 K1   K2 K3

F3 15 Amp   F4 15 Amp

CB PK-5 Box

L1 L2 GND

Power Input

240V / 1 Phase Connection

Notes:
Quantity of IR Emitters are based on IS System.
Traditional sauna heater is optional.

Field Wiring   – – – – – –
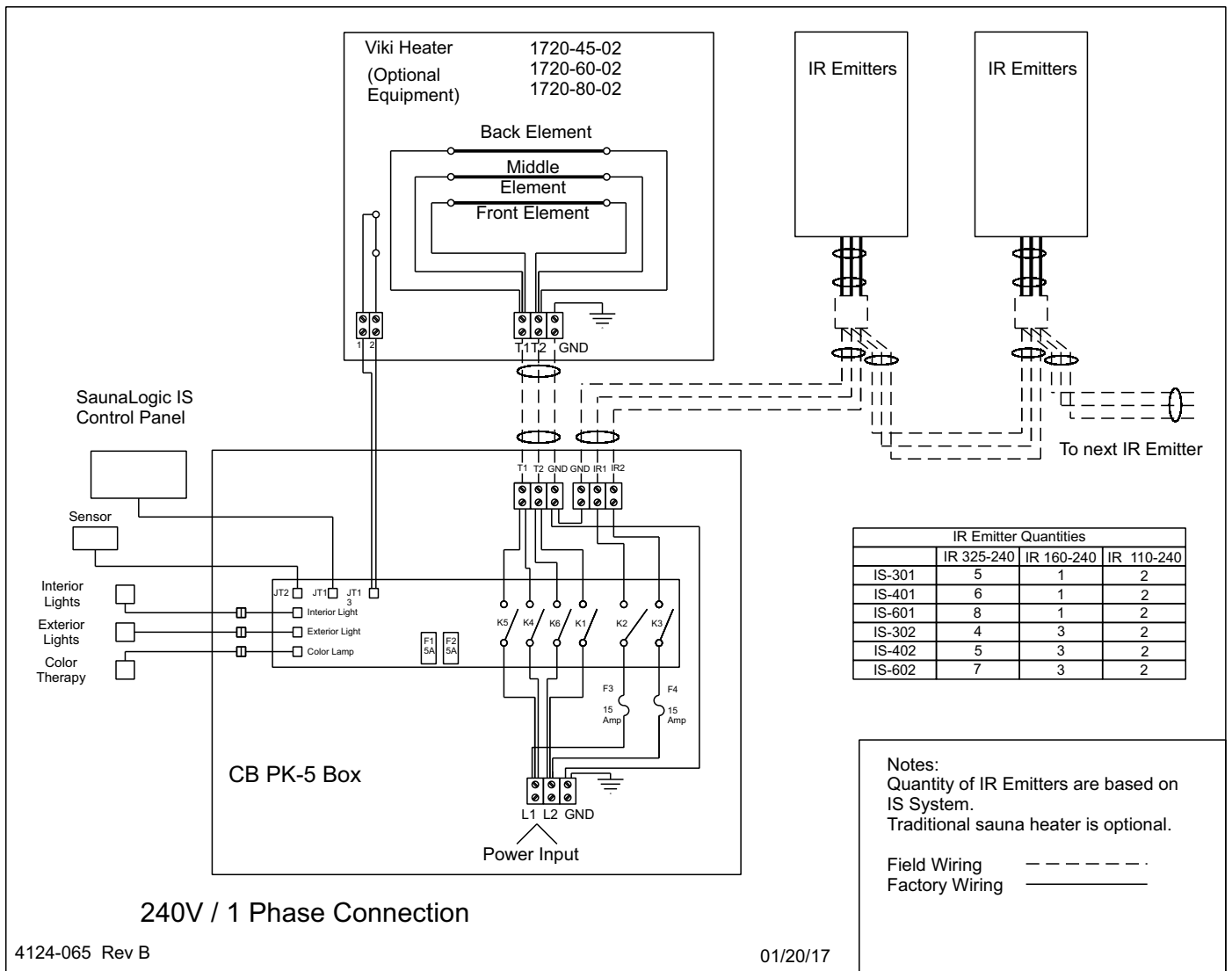Factory Wiring   ——————

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DIAGRAM 7 CONT.

WIRING DIAGRAM: CONTROL AND HEATER MODELS **Viki 4.5, 6.0 & 8.0 (1720-45-02,1720-60-02,1720-80-02) SaunaLogic IS and CB PK Box**

Viki Heater   1720-45-02
(Optional   1720-60-02
Equipment)   1720-80-02

Back Element

Middle Element

Front Element

T1 T2   GND

1   2

IR Emitters

IR Emitters

To next IR Emitter

SaunaLogic IS
Control Panel

Sensor

T1   T2   GND   GND   IR1   IR2

Interior Lights

Exterior Lights

Color Therapy

JT2   JT1   JT1
    3

Interior Light

Exterior Light

Color Lamp

F1 5A   F2 5A

K5   K4   K6   K1   K2   K3

F3 15 Amp

F4 15 Amp

CB PK-5 Box

L1   L2   GND

Power Input

240V / 1 Phase Connection

IR Emitter Quantities			
	IR 325-240	IR 160-240	IR 110-240
IS-301	5	1	2
IS-401	6	1	2
IS-601	8	1	2
IS-302	4	3	2
IS-402	5	3	2
IS-602	7	3	2

Notes:
Quantity of IR Emitters are based on IS System.
Traditional sauna heater is optional.

Field Wiring   — — — — — —
Factory Wiring   ————————

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SECTION 2: INSTALLATION SUMMARY AND TIPS

ELECTRICAL: ROUGH IN:
Step 1: *Is a traditional sauna heater being installed in room?*
If yes, the traditional heater location must be chosen first. If the room is over 78" and the heater is hung on the wall and the IR assembly can be installed above the tradional sauna heater. There has to be 5" of clearance above the traditional sauna heater and the bottom of the IR assembly. See Diagram 1 for specific spacing requirements. If no, proceed to step 2.

Step 2: *What IS system should be installed in the room?*
The system will determine how many IR emitters will be in the room. See Diagram 7 for the quantities of IR emitters. Try to evenly space the IR emitters in the room behind the benches. See Diagram 3 for IR emitter size information.

Step 3: *IR Panel Wire Installation*
Pull 14-2 AWG wire w/ground BX cable from the CB PK Box to closest IR emitter. Install a metal single gang junction box 24" below the bottom of the estimated height of the IR heating panel. Daisy chain the wire from the first IR emitter to the next junction box and continue to loop and leave wires sticking out for each single gang box.

Step 4: *Traditional Sauna Heater* Wiring traditional sauna heater (optional). Refer to Diagram 2 for the traditional sauna heater for wire size or a 72" wire is provided with the sauna heater. Preinstall wire from the CB PK box to the location of the bottom of the sauna heater.

A two conductor cable is provided with the sauna heater for the high limit safety switch. Preinstall wire in the wall. *The traditional sauna system will not work if the wires and switch are not connected.*

Step 5: *Lighting Installation (Optional Equipment)* SaunaLogic IS is capable of operating ONLY a lighting package purchased with the system. The lighting package consists of 3 color therapy lights, 2 interior lights, 3 exterior lights, and the cables to connect the light assemblies to the CB PK box. The cables provided are 176" from CB PK box to the first light fixture. Then the cable is 60" between the fixtures. All cable lengths are similar depending on the number of fixtures.

Predetermine light fixture locations in the ceiling based on cable lengths and CB PK box location. Route the cable provided from the desired light locations in the ceiling to the CB PK box before any tongue and groove is applied.

Cut 2 3/4" holes in tongue and groove boards for light fixtures as the tongue and groove is being applied. Ensure the lighting cables reach the hole locations.

WARNING

Refer to Diagram 1 for minimum clearance of ceiling above heater.

Fire sprinkler systems used inside any sauna room should be properly rated for sauna room temperatures.

Do not spray water on Infrared Emitters

Water use on Infrared Emitters may cause damage and will void warranty.

Do not install a shower in the sauna room.

Electric Shock Hazard - High voltage exists within this equipment. There are no user serviceable parts in this equipment.

All installation and service to this equipment should be performed by qualified licensed personnel in accordance with local and national codes.

Use only copper wire of the size and type indicated in the Heater Specification Chart and the temperature rating indicated on the heater junction box.

All heaters and controls must be grounded per NEC to prevent electrical shock in case of unit failure.

Electrical outlets or receptacle must not be installed in a sauna room.

SECTION 3: TEMPERATURE SENSOR

Locate top of sensor 2" from ceiling and directly above the IR-325-240 IR panel AND traditional sauna heater if installed. (traditional sauna heater is optional equipment.)

Feed the 17 ft "low voltage" sensor wire from the sensor location to the CB PK box location. Sensor wire must be routed completely separate (as per low voltage electrical wiring codes) from any wiring carrying over 50 volts. It may be necessary to drill holes to string the wire through the studs or ceiling joists.

Using a flat tip screwdriver, unsnap sensor cover from sensor. Mount sensor to a finished wall directly above heater and two (2) inches down from ceiling using two (2) screws (provided) as shown in Diagrams 1, 3 & 5.

Connect wires to JT2 on the circuit board inside the CB PK box.

SECTION 4: ROOM AND ELECTRICAL INSTALLATION

ROOM ROUGH IN FOR SURFACE MOUNT IR EMITTERS:

Build the frame the room with standard building materials and framing design.

Install single gang outlets below the IR Emitters. Rough in all lighting wires, IR emitters wires, Sensor wire, Control wires before insulating the room and applying foil vapor barrier.

Tongue and groove the ceiling. While installing the tongue and groove on the ceiling continue to cut in the light holes and install and connect the lights as the ceiling is installed. Access will be difficult after ceiling is completed.

Apply tongue and groove wood on the walls (vertical or horizontal depending desires installation). Cut wood around the electrical access boxes. Cut an electrical access behind the IR Emitter to feed the wire from the emitter into the electrical box. (Pictures do not show the cut out behind IR emitter.)

Remove the cover from Surface Mount IR Emitter by holding the wire on the back of emitter and pull the cover away to the front. It will release a mechanical lock. Install the wire from the IR emitter into the wall and into the electrical box below. Install the extra wire in the wall and then attach IR emitter panel to the wood wall with 6 screws (3 on each side).

Reinstall the cover by placing the top of cover over the IR panel and pull down. It will catch two notches at the top of the wall and then push the lower part of the cover against the IR panel and the cover will "click" into place. The cover will be flush all the way around the IR emitter for clean finished look.

Splice in the electrical panels into the electrical box and cover with metal single gang blank plate.

Continue this process to complete the room.

SECTION 4: ROOM AND ELECTRICAL INSTALLATION CONT.

ROOM ROUGH IN FOR RECESS MOUNT IR EMITTERS:

Build the frame the room with standard building materials and framing design.

Install single gang outlets below the IR Emitters. Rough in all lighting wires, IR emitters wires, Sensor wire, Control wires before insulating the room and applying foil vapor barrier.

Tongue and groove the ceiling. While installing the tongue and groove on the ceiling continue to cut in the light holes and install and connect the lights as the ceiling is installed. Access will be difficult after ceiling is completed.

Install 5/8" plywood on the walls. Cut the plywood around the electrical access boxes. As the plywood is applied to the wall, cut out the IR Emitter placement in the plywood The size of openings are in Diagram 6.

Apply tongue and groove wood on the walls (vertical or horizontal depending desires installation). Cut wood around the electrical access boxes and the IR emitter openings.

Install the IR emitters in the openings and feed the wire in the wall to the electric box below the panel. Install the extra wire in the wall and pin nail the IR emitters to the tongue and groove wall on the left and right side of panels. DO NOT pin nail in the top or bottom of IR emitters.

Splice in the electrical panels into the electrical box and cover with metal single gang blank plate.

Continue to install panels until the room is completed.
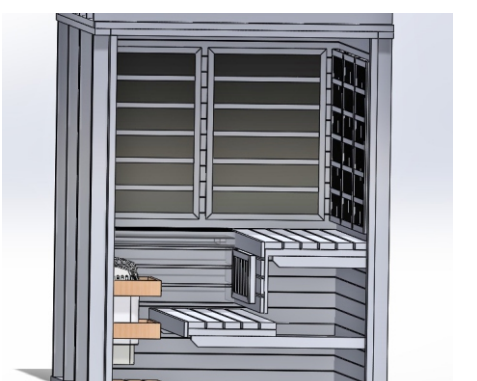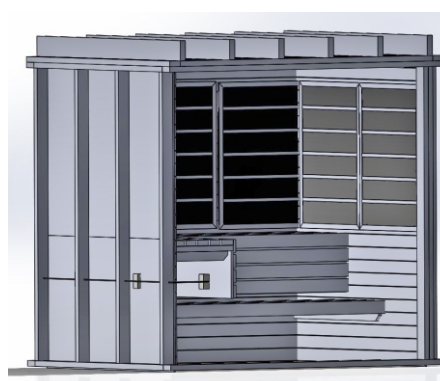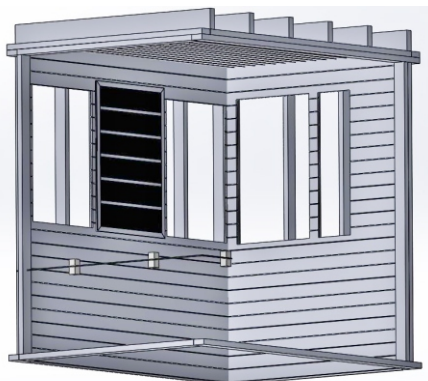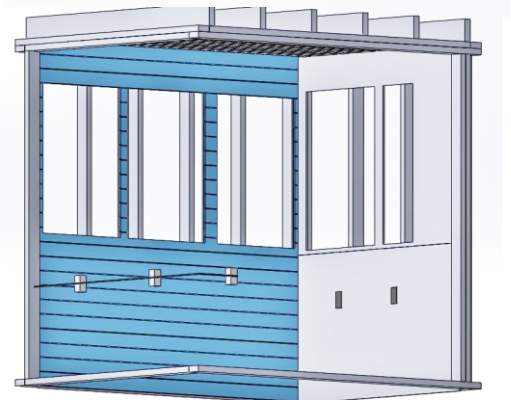
SECTION 5: ELECTRICAL CONTROLS INSTALLATION

Electrical installation must be made by a licensed electrician in accordance with the National Electrical Code and local regulations.

Remove the screws from the CB PK box to access the electrical connections. Secure CB PK box to the wall in the sauna room according to Diagram 1. (4 screws provided in the box) Route the wires through the holes provided on the bottom of the control box and connect the wires to the terminal block. To determine the correct wire size, refer to Diagram 2. Use copper supply wire only, suitable for minimum 90 degrees C. The heater must be grounded! See Diagram 6 for proper connections.

Refer to the Installation and Operation Manual for all electrical questions about the traditional sauna heater.

Connect low voltage cable from the SaunaLogic IS control to *JT1* of the circuit board in the CB PK Box. Connect sensor cable to *JT2* of the circuit board in the CB PK Box. Connect the color therapy light cable to *Color Lamp* of the circuit board in the CB PK Box. Connect the cable from Interior lights to the connector labels *Interior Lights*. Connect the cable from exterior lights to the connector labels *Exterior Lights*.

Connect the traditional sauna heater high limit sensor cable to *JT13* of the circuit board in the CB PK Box. (optional equipment)

Surface Mount IR Emitter Installation
Remove the cover from the IR panels by pushing the front bottom of the panel through the cloth.

Install the wire harness from the IR emitters into the wall to the pre-installed single gang boxes. Connect all wires in the electrical junction box appropriately. All IR emitters should be grounded.

Install the IR assembly to the tongue and groove wall with 6 wood screws provided with the kit. Ensure the excess wire is pushed in the wall behind the IR emitter.

Clip the cover over the top of the heater and push the bottom of the cover against the mechanical clips.

SECTION 6: SAUNALOGIC IS CONTROL OPERATION

OPERATING INSTRUCTIONS FOR IR EMITTERS .
Press the red POWER button once. The Infrared heaters will turn on and begin heating the room to current set points. At the end of the selected time (60 minutes maximum), the control will turn itself off and the control display will turn off. The infrared room temperature will be displayed on the control. The default settings for Infrared temperature is preset to 120°F, the bath time is set to 60 minutes and 0 minute delay to start to heat. These settings are adjustable (as described below) from 110° to 149°. Length of sauna can be set from 0 to 60 minutes. The time delay before start can be up to 23 hour and 59 minutes

SETTING THE DURATION AND TEMPERATURE
To set the sauna length of time, press the control POWER button to turn on the heater. Press the TIME "+" or "-" buttons on the control to increase or decrease time for desired setting. The maximum of time is 60 minutes.

To set the temperature, press the control POWER button to turn on the heater. Press the TEMP "+" or "-" buttons on the control to increase or decrease temperature for desired setting. The maximum temperature is 149°F (65°C).

Note: Typical bathing temperature is 115F to 125F displayed on the control. Starting ambient temperature below 70F will cause the IR system to heat slower, which may result in less effective performance.

OPERATING INSTRUCTIONS FOR SAUNA HEATER
Press the Traditional Sauna button on the SaunaLogic IS and the default settings for the temperature is preset to 176°F, the bath time is set to 60 minutes and 0 minute delay to start to heat. These settings are adjustable (as described below) from 125° to 194°. Length of sauna can be set from 0 to 60 minutes. The time delay before start can be up to 23 hour and 59 minutes.

SETTING THE DURATION AND TEMPERATURE
To set the sauna length of time, press the red POWER button to turn on the heater and press the TRADITIONAL sauna button. Press the TIME "+" or "-" buttons on the SaunaLogic IS to increase or decrease time for desired setting. The maximum of time is 60 minutes.

To set the temperature, press the control POWER button to turn on the heater. Press the TEMP "+" or "-" buttons on the SaunaLogic IS to increase or decrease temperature for desired setting. The maximum temperature is 194°F (90°C).

Note: Typical bathing temperature is 150F to 165F displayed on the control.

PRE-SETTING DELAYED START
With the electricity applied to the CB PK box, press the SaunaLogic IS POWER button once. The room temperature will be displayed on the control. Press the "Pre-setting" button. Press the TIME "+" or "-" buttons on the control to increase or decrease delay time for desired setting. The maximum of time is 23 hours and 59 minutes. If no delay start is desired, set to 00:00 and press "Pre-Setting" button.

Note: The " **:** " will flash between the numbers in the time display when system is in the delayed start mode.

SECTION 7: HIGH LIMIT CONTROL (RESET BUTTON)

The sauna systems have a built-in high limit control, which automatically turns off the heater if the temperature inside in the sauna room rises to an abnormally high level.

The control will display "HL" if the system overheats. To restart the heater, let the room cool, then push the "On/Off" button on the control. If the high limit continually shuts off the heater, contact a service representative at 1-888-780-4427.

SECTION 8: HOW TO TAKE A SAUNA

• When taking a sauna, allow time to relax completely.
• Remove clothing and jewelry...if required, wear a towel loosely.
• After 10 minutes or when perspiration begins, leave sauna and relax in dressing area...follow with a cool shower.
• Cooling time should equal time spent in sauna. Enter sauna room again and stay 5 or 10 minutes.
• Repeat the cycle 2 or 3 times; end with a brisk shower...rinse in cool water.
• Dress when completely dry and perspiration has stopped.
• Do not smoke, exercise or drink alcoholic beverages in the sauna room.

SECTION 9: MAINTENANCE

The sauna, like a bathroom, should be kept clean and odor free.

Towels or mats should always be used on benches and floor as perspiration otherwise penetrates the soft wood.

Air out the sauna often by keeping the door and vents open when the sauna is not in use. Saunas that are in daily use should be washed down at least once a week to keep them clean and the air fresh. Duckboard should be removed from the sauna, the sauna floor mopped and dried in a conventional manner, and the duckboard thoroughly scrubbed and dried before returning to the sauna room. The sauna heater should be wiped down occasionally with a damp cloth to remove lint and dust. The rocks should be removed once a year for cleaning and small or crumbled rocks replaced.

To clean and remove perspiration stains, use soap or detergent in warm water, best applied with a scrub brush. Badly soiled surfaces may require sanding. Sand paper wrapped around a wooden block works well.

Benches and supporting structure must be inspected annually for potential deterioration due to age, dry rot or abuse. Any boards with signs of deterioration should be replaced immediately to avoid possible injury.
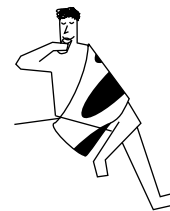

Shower

Sauna (10 - 15 min.)

Shower or swim

Rest (10 - 15 min.)

Relax with juice or water

You liked it?
Do it once again and
you will feel great.

SECTION 10: WARNING PLACARDS

Two metal placards are included in the Installation Instruction Envelope packaged with every Sauna Heater. The CAUTION placard must be attached to the interior wall of the sauna room directly above the heater where it is visible to the bather. The WARNING placard must be attached to the door of the sauna room.

SECTION 11: ROOM CONSTRUCTION

For safety and reliability, the following rules must be addressed.
- No permanent locking or latch system is to be used on the sauna door.
- Acceptable door fittings are: magnetic catches, friction catches, spring or gravity loaded closures.
- The door must always open outwards.
- No shower may be installed in a sauna room.
- No electrical receptacle shall be installed inside the sauna room.
- The enclosed WARNING: Reduce the risk of overheating … warning plate must be mounted on or alongside the door outside the sauna room at about eye level.
- The enclosed CAUTION: Reduce the risk of fire … caution plate must be mounted on the interior wall above the heater.
- If an intercom speaker is installed, it should be as close to the floor as possible.
- Fire sprinkler systems installed inside any sauna room should be properly rated for sauna room temperatures.
- Always mount the heaters according to these installation instructions
- Typical wall design, 2x4 studs, insulation, foil vapor barrier, and tongue and groove boards. Refer to Diagrams 3 and 8.

SECTION 12: VENTILATION

VENTILATION In a private sauna, the air should be changed about 6 times an hour. This can be achieved by making a vent opening (fresh air inlet) in the sauna wall directly below the heater. The air outlet must be lower than the upper benches, as far as possible from the heater and about two feet higher than the fresh air inlet vent, See Diagram 9. It is recommended that ventilation openings meet the requirements of UL Specification 875. The minimum opening should be determined using one of the following formulas:

For $R<31$, $V\geq9.3$,   For $R\geq31$, $V\geq0.3R$

where   R = the floor area of the room in square feet and
V = the minimum vent size in square inches

WARNING

The "CAUTION" and "WARNING" placards must be mounted in accordance with Section 10.

⚠ WARNING
REDUCE THE RISK OF OVERHEATING

* Exit immediately if uncomfortable, dizzy, or sleepy. Staying too long in a sauna is capable of causing overheating.
* Supervise children at all times.
* Check with a doctor before use if pregnant, in poor health, or under medical care.
* Breathing heated air in conjunction with consumption of alcohol, drugs, or medication is capable of causing unconsciousness.

⚠ CAUTION
REDUCE THE RISK OF FIRE
Do Not Place Combustible Material On The Heater At Any Time.

For safety purpose sauna door must open out and not lock.

Never use a wood stain, seal or preservative on the inside of your sauna room.

Light fixtures get very hot during operation. Locate light fixture where it will not be a burn hazard.

DIAGRAM 8

TYPICAL PRE-CUT WALL CONSTRUCTION

2x4" framing   1/2" wallboard

fiberglass insulation

foil vapor barrier

T&G soft wood

1/2" wallboard

DIAGRAM 9

VENTILATION

Locate vent under
the top bench

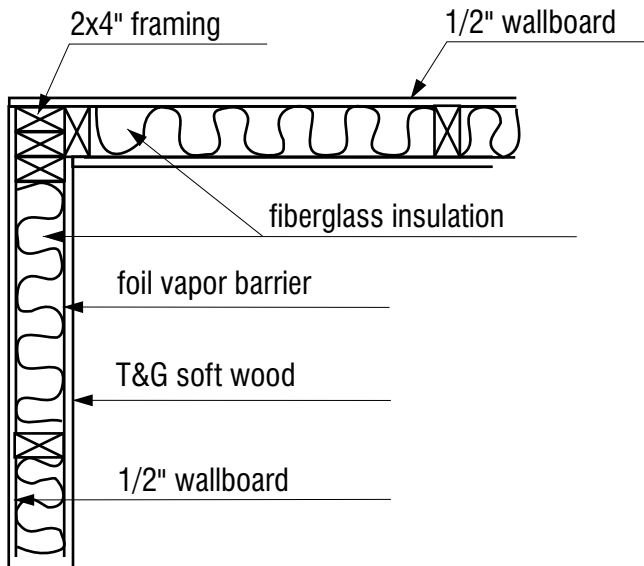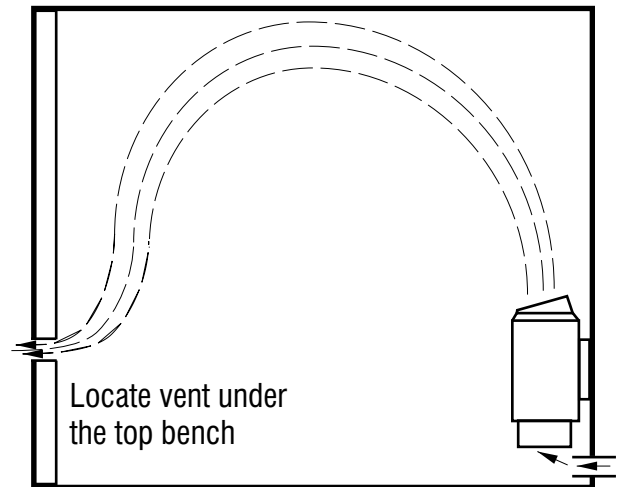## SECTION 14: TROUBLESHOOTING

If control displays "SN" it means no sensor is connected. Refer to Section 4 for sensor installation information.

If control displays "HL" it means the high limit is open and the heater is too warm. Refer to Section 7 for high limit information. There is one high limit for each system. Need to determine which system is operating to know which high limit is alarming.

System won't start to heat, ensure the system is not in the delay mode. If ":"is flashing in the time display the system is in the delay mode.

For troubleshooting or service questions call 1-888-780-4427 and ask to speak with service. Prior to calling, please have the Model and Type number available. You may also e-mail at techsupport@saunatec.com