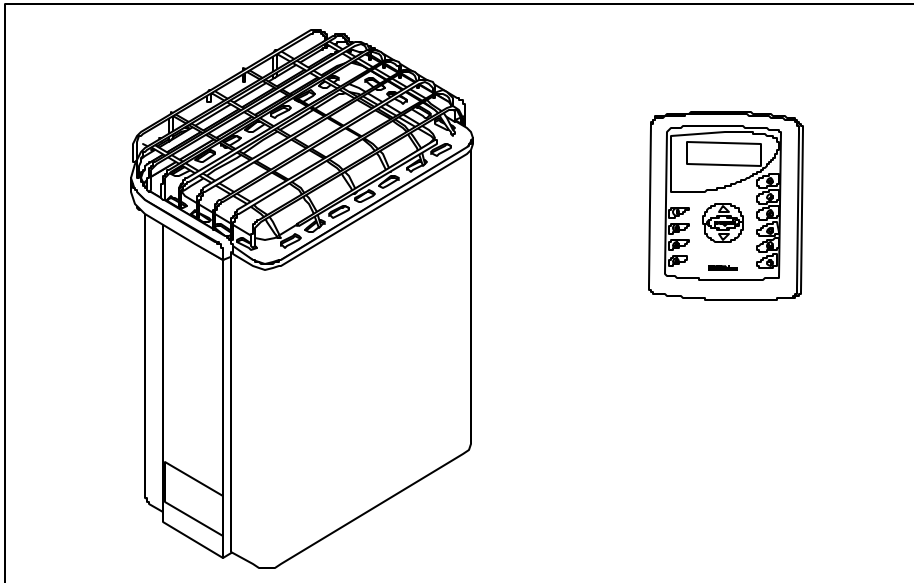


"Digi II" Series Heater Installation & Operation Instructions



Digi II SAUNA HEATERS and CONTROL Models 1714-450-1705, 1714-600-1705, 1714-800-1705 (With Control 1601-12)

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

These heaters are UL approved for permanent installations and electrical connections. Built with splash proof construction, the conducting parts are protected against water. All wiring must be performed in accordance with local codes. See Diagram 4 for wire and room size requirements.

These heaters are wall mounted, 18¾" W x 11" D x 24¼" H, with wall mounted controls.

WARNING

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

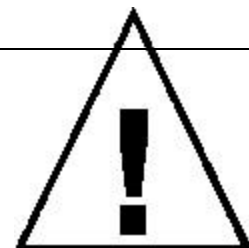
Pregnant women or persons with poor health should consult their physician before using any sauna.

Caution fire hazard: Do not use the sauna room for drying clothes, bathing suits, etc. Do not hang towels above heater or place any object other than the rocks supplied on the 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 extremely hot during operation and should not be touched or burns may result.

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



"Digi II" Series Heater Installation & Operation Instructions

DIAGRAM 1

MOUNTING BRACKET LOCATION AND MINIMUM DISTANCE TO COMBUSTIBLE MATERIAL

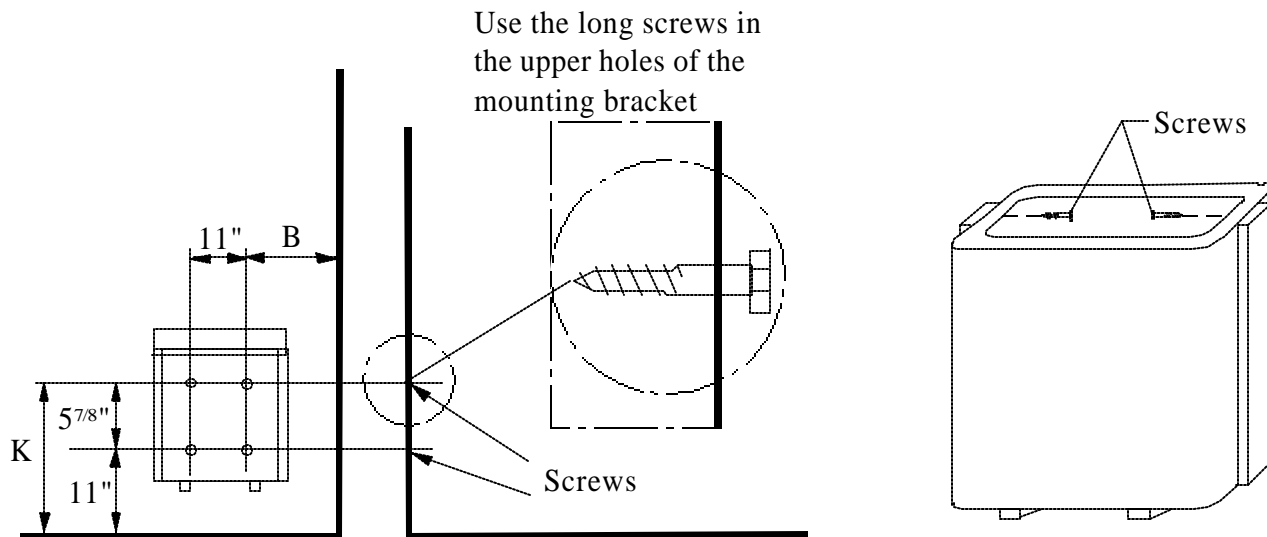
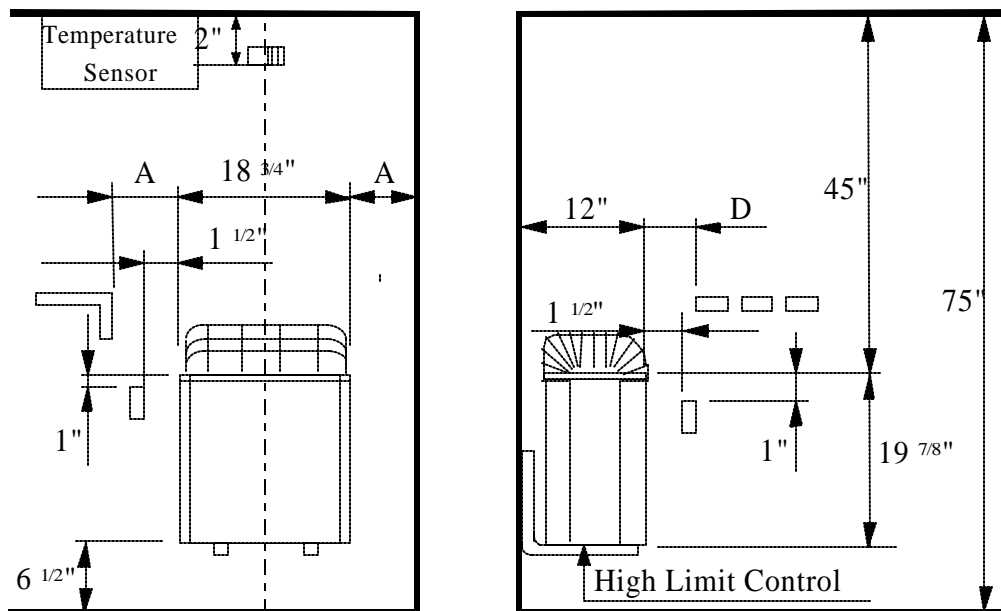


Table 1



"Digi II" Series Heater Installation & Operation Instructions

SECTION 2: MOUNTING OF SAUNA HEATER

HANGING THE HEATER Using the template provided, drill four 9/64" holes to fasten the heater brackets to the wall. Install two 1/4" x 1 1/2" hex head lag screws (supplied with the heater) through the top holes on the mounting brackets (one screw per bracket). Tighten these screws. The screws must be threaded through the wall into a framing member or backing board to support the heater weight. Locate the two 1/4" x 1" hex head lag screws (supplied with the heater) then install them into the two lower mounting holes. Tighten to lock the heater brackets in place.

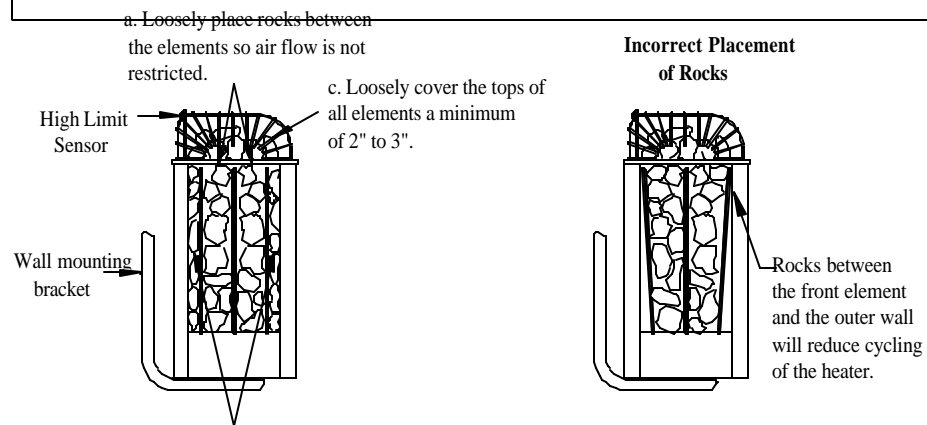
Place the heater on the wall brackets and fasten with screws. See Diagram 1 & 2 for the heater location details and the necessary

SECTION 3: PLACING OF ROCKS

The rocks supplied with the heater have been chosen to provide the best heater performance. Use of any other type of rock may void the heaters warranty. Never operate the heater without rocks in place!

Rinse the rocks with water before placing in the heater. Packing the rocks too tightly may cause the heater high limit switch to trip. Follow the below rock placement instructions. After completion, attach the guard with the screws provided.

On a yearly basis, remove all rocks, clean rock fragments, and reinstall reusable rocks. Follow the directions below for placement and the



b. Rocks must be placed between the elements and the wall of the rock compartment.

1. Put smaller rocks in first around the outer perimeter of the heating chamber.
2. Completely fill all four sections (front, 2 center sections between elements, and back). In the outer sections, use smaller rocks placed more tightly (see note b).
3. Place rocks loosely in the center 2 sections (see note a).
4. Be sure rocks completely cover the elements (see note c).

WARNING

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

Do not pour chlorinated pool or spa water on heater. Excessive water use on heater may cause damage and 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.

Do not construct sauna room so as to restrict air flow through the bottom of the heater.

Packing the rocks too tightly may cause the heater high limit switch to trip.

"Digi II" Series Heater Installation & Operation Instructions

DIAGRAM 2

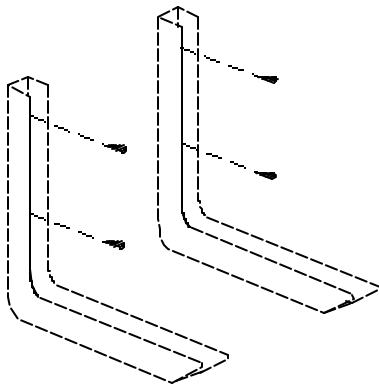


DIAGRAM 3

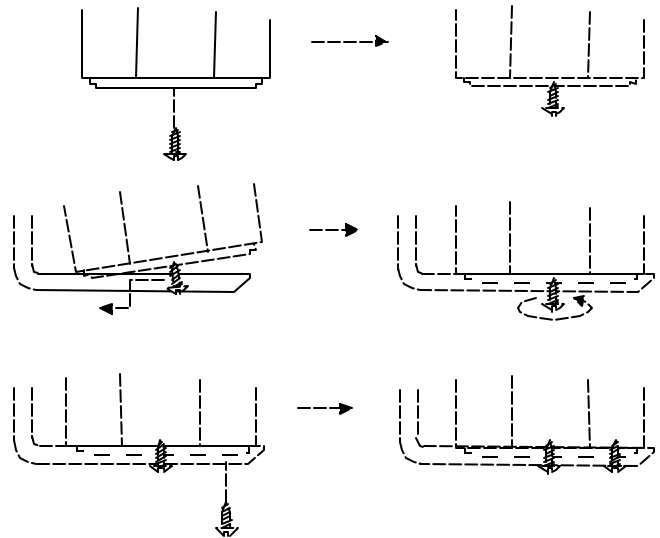


DIAGRAM 4

HEATER MODEL Product Number	kW	MINIMUM ROOM			MAXIMUM ROOM		PHASE	VAC	AMPS	WIRE SUPPLY TO HEATER
		Floor Area	Ceiling Height	Volume Cu. Ft.	Ceiling Height	Volume Cu. Ft.				
Digi II 4.5 1714-450-1705	4.5	16 sq. ft.	75"	100	96"	210	1	208	21.6	2 #10 AWG + N+Gr
							1	240	18.8	2 #10 AWG + N+Gr
							3	208	12.5	2 #12 AWG + N+Gr
							3	240	10.8	2 #12 AWG + N+Gr
Digi II 6.0 1714-600-1705	6.0	28 sq. ft.	75"	175	96"	310	1	208	28.8	2 #8 AWG + N+Gr
							1	240	25	2 #8 AWG + N+Gr
							3	208	16.7	3 #12 AWG + N+Gr
							3	240	14.4	3 #12 AWG + N+Gr
Digi II 8.0 1714-800-1705	8.0	40 sq. ft.	75"	250	96"	425	1	208	38.5	2 #8 AWG + N+Gr
							1	240	33.3	2 #8 AWG + N+Gr
							3	208	22.2	3 #10 AWG + N+Gr
							3	240	19.2	3 #10 AWG + N+Gr

"Digi II" Series Heater Installation & Operation Instructions

SECTION 4: ELECTRICAL HOOK-UP

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

Remove the painted cover from the side of the heater. Route the feed wires through the holes provided in the bottom of the heater and connect the wires to the appropriate labeled wires. To determine the correct wire size, refer to Diagram 4. Use copper supply wire only, suitable for minimum 90 degrees C. The heater must be grounded! See Diagram 5 for proper connections.

SECTION 5: HEATER SCREEN (GUARD RAIL)

Install a wooden heater guard to prevent the sauna bather from accidentally touching the sauna heater. Install the heater guard rail with the height clearances and dimensions shown in Diagram 7.

SECTION 6: OPERATION

The control for this heater has a thermostat to adjust the sauna temperature and a timer to control when the heater starts and stops. The maximum the timer will allow the heater to operate is 60 minutes. For health and fire safety, never attempt to alter or bypass the timer or thermostat.

The Digi II (1601-11) Control should be mounted outside the room. The control has 16ft control wire supplied. The maximum control wire length would be 90ft.

The sensor should be mounted over the heater 2" from the ceiling and connected to the circuit board on terminals 2 and 3. See **Diagram 1**

Control Overview

Alarms The control is equipped with an alarm that indicates a faulty thermostat sensor and or wire. The control will display "heat sensor cable cut". During the alarm the control will turn power off to the heater and the display will remain on the control. Rectify the fault situation and recycle power to heater. If problem persists refer to **Section 13**.

Locking Key Pad The control keypad can be locked. With the control in the Off mode, press the up arrow key and then **press** the down arrow key. "Locked" will be displayed. This will make all key inactive until the control is unlocked.

WARNING

Do not locate benches over heater. Minimum clearance of ceiling above heater 45".

For minimum clearance from heater to wooden surfaces refer to Diagram 1 for distances. The mounting brackets supplied provide the proper clearance from the heater to the wall.

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.

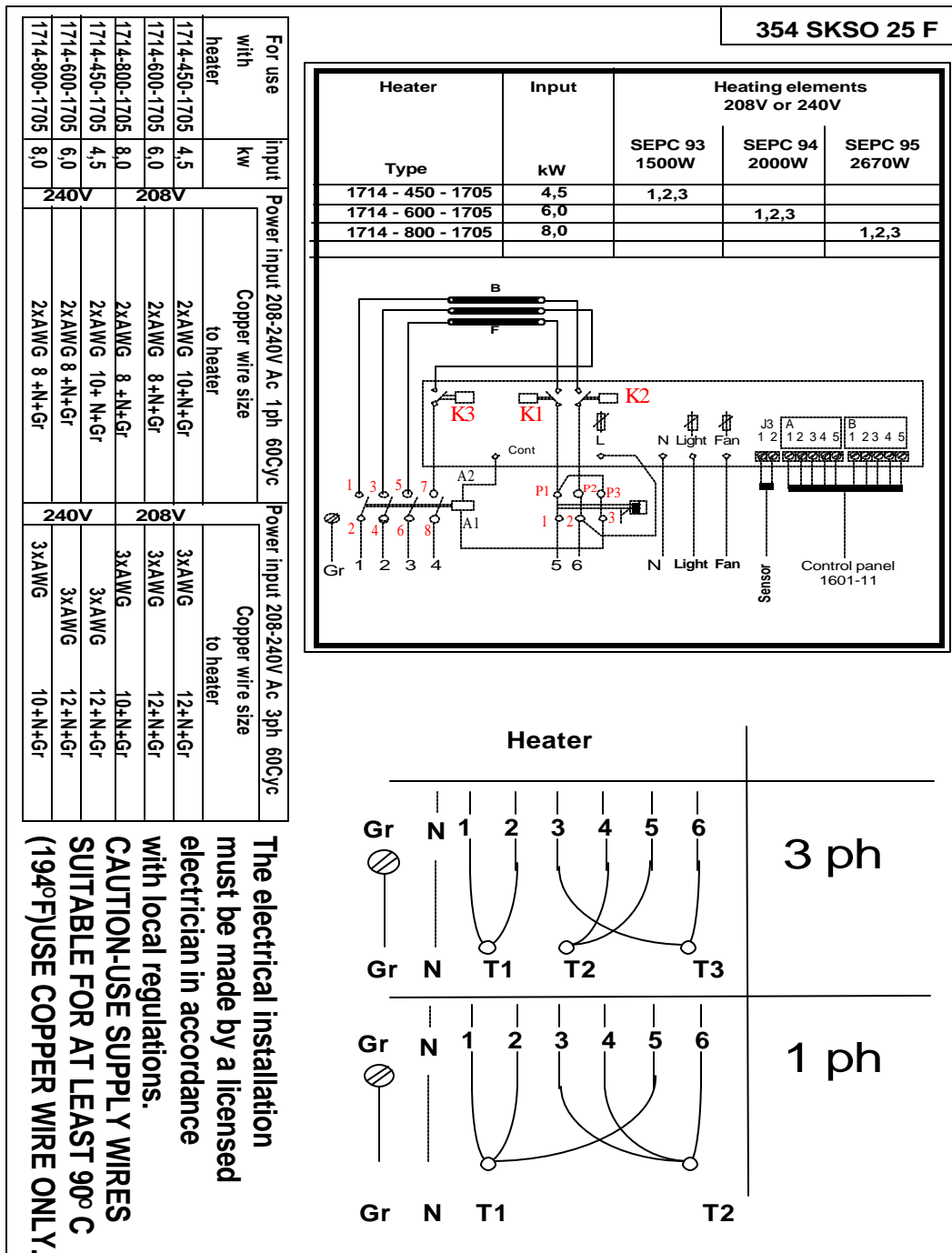
All heaters and controls must be grounded per NEC to prevent electrical shock in case of unit failure.

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

A guardrail or fence is required around the heater to prevent burns from accidental contact.

"Digi II" Series Heater Installation & Operation Instructions

DIAGRAM 5



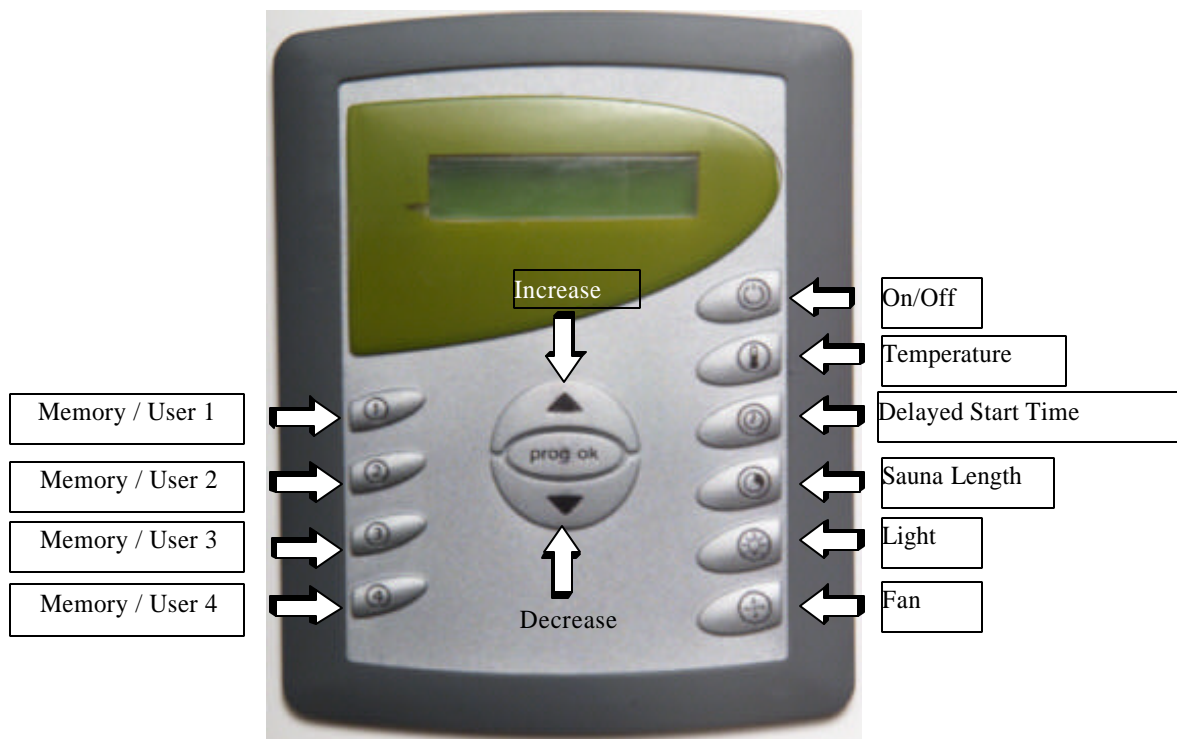
IMPORTANT: A neutral wire is required to operate the control. The electrical installation must be made by a licensed electrician in accordance with local regulations.

Use 14-2 with ground wire for the fan and light.

CAUTION-USE SUPPLY WIRES SUITABLE FOR AT LEAST 90°C (194°F) USE COPPER WIRE ONLY.

"Digi II" Series Heater Installation & Operation Instructions

SECTION 6: OPERATION, CONTINUED



Control Setup:

This setup has **6 different menus**.

To escape from this **Setup Menu**, press the **On/Off** button or the device will **automatically exit** the menu in approx. **4 seconds**.

To enter the Setup Menu press **PROG/OK** button and hold down for approx. **3 seconds** until the following appears in the display:

MENU 1
TIME: 12:00

Setting the Clock: Press the up arrow and hold down: The minutes and hours will begin to change. When the hour reads the correct time, release the up arrow key and enter minutes by repeatedly pressing the arrow key for each minute. Press **PROG/OK** to save the time in memory.

Next will display:

MENU 2
LANGUAGE: ENGLISH

Setting Language: Press the up or down arrow key repeatedly until the language you desire appears in the display. Press **PROG/OK** to save in the Language in memory.

"Digi II" Series Heater Installation & Operation Instructions

SECTION 6: OPERATION, CONTINUED

Next will display:

MENU 3

OFFSET: T1 0C

Using the arrow keys, select the calibration value (0 +/-10C).

Example: After reading the temperature on the thermometer in the sauna, you noticed that the temperature reading in the display is 4C higher. Set Offset T1 to -4C to get the displayed temperature to match the thermometer. **(This offset does not change the actual temperature, this is just for indication only.)** Press **PROG/OK**: to save the calibration value.

Next will display:

MENU 4

SMARTSAUNA: OFF

Using the arrow keys, select ON or OFF Press **PROG/OK**: to save the setting.

Note: SmartSauna measures the temperature in the sauna, and based on this information, the control will determine the length of time needed to heat the sauna to the set value. **This function is only available in timer mode.**

Next will display:

MENU 5

CLOCK: 24 h

Using the arrow keys, select a 12 or 24-hour clock. If a 12-hour clock is selected, AM or PM will appear in the display after the time. Press **PROG/OK**: to save the setting.

Next will display:

MENU 6

TEMPERATURE: C

Using the arrow keys, select the desired temperature scale. (Celsius or Fahrenheit) Press **PROG/OK**: to save the setting.

Programming Memory (User buttons)

Press **ON/OFF** and the greeting appears in the display and the backlight comes on. Next press **PROG/OK** and the following will appear in the display: The first number indicates start time, the length of sauna, and the last is desired temperature.

17:30 01:00 The maximum the timer will allow the heater to operate is 60 minutes.
50C

Note! The start time reading in the display is not saved in the memory slots. Time delay is not a memory option.




Press the **Sauna Length** button and the hours and minutes (hh:mm) will appear in the display.

Sauna Length: **01:00** The duration can now be set using the arrow keys. When the desired time has been selected, press **PROG/OK** to return to previous screen.

"Digi II" Series Heater Installation & Operation Instructions

SECTION 6: OPERATION, CONTINUED

Programming Memory (User buttons) continued...

Press the **TEMPERATURE**  button and the temperature value will appear in the display current temperature setting: **50C** The temperature can now be set using the arrow keys. When the desired temperature has been selected, press **PROG/OK** and the display will return to the previous screen.

To save the values to memory, press the memory buttons 1. The display will now read:

PROGRAM1
01:00 50C

Press **PROG/OK** once again to return the display to **17:30 01:00 50C**.

To program another memory button go back to the beginning of Programming Memory (user buttons). Press **ON/OFF** to exit the programming mode.

Review When the device is in Off mode, you can review your programmed values by pressing the memory buttons.


Setting Time Delay without Saunasmart:

The control is in the Off mode:

Press **ON/OFF** and A greeting appears in the display and the backlight comes on.

Press **PROG/OK** and the following will appear in the display start time, sauna length, and temperature.

17:30 01:00 90C The maximum the timer will allow the heater to operate is 60 minutes.


Press Time Delay  button and the hours and minutes (hh:mm) will appear in the display.

START:
12:00

The start time can now be set using the arrow buttons. When the desired time has been selected, press **PROG/OK** and the display will return to the previous screen.

Press the **Sauna Length**  button and the hours and minutes (hh:mm) will appear in the display.

Sauna Length: **01:00** The duration can now be set using the arrow keys. When the desired time has been selected, press **PROG/OK** to return to previous screen.

Press the **TEMPERATURE**  button and the temperature value will appear in the display current temperature setting: **50C** The temperature can now be set using the arrow keys. When the desired temperature has been selected, press **PROG/OK** and the display will return to the previous screen.

Press **PROG/OK** and hold down for about 3 seconds until the following appears in the display:

15:00
17:30 SAUNA

15:00 is the current time and **17:30** is the start time, when the sauna is automatically turned on.

"Digi II" Series Heater Installation & Operation Instructions

SECTION 6: OPERATION, CONTINUED

Setting Time Delay with Saunasmart:

Saunasmart means choosing the time to enter the hot room, not the time to turn the heater on. The system will calculate when to turn on in relation to entry time. The control will be able to determine how long the system needs to run to reach set temperature. This function usually takes 3 heat cycles to get time versus temperatures memorized.

The entire programming process is the same as "Setting Time Delay without Saunasmart" except for the final step of programming display.

15:00

17:30 SMART

15:00 is the current time and **17:30** is the time the room is ready to enter.

Everyday Setting:

If you want to take a sauna every day at the same time, do the following:

Press **PROG/OK**. The following will appear in the display start time, duration and temperature.

17:30

01:00 The maximum the timer will allow the heater to operate is 60 minutes.

90C

Press **PROG/OK** and hold down for about 3 seconds until the following appears in the display:

15:00

17:30 SMART (or **Sauna** depending on what delay mode is selected)

15:00 is the current time and **17:30** is the time the room is ready to enter.

Daily Operations of Memory (User buttons):

Press **ON/OFF** and the greeting appears in the display and the backlight comes on.

Press the appropriate button to start operation of the **Light** and **Fan** ; press again to shut off. The corresponding symbols will appear in the display.

Press **Memory Button 1 - 4**: The system will turn on and operate until program has expired. The control will then turn off.

Daily Operations Using Time Delay Functions:

Press **ON/OFF** and the greeting appears in the display and the backlight comes on.

Next press **PROG/OK** and the following will appear in the display start time, duration and temperature.

17:30

01:00 The maximum the timer will allow the heater to operate is 60 minutes.

90C

If all information is correct: Press **PROG/OK** and hold down for about 3 seconds until the following appears in the display: Leave the control on and return when system is ready.

15:00

17:30 SMART (or **Sauna** depending on what delay mode is selected)

If the control settings are not correct, go to the "**Setting Time Delay**" portion of the manual to program control and then return to portion when completed.

"Digi II" Series Heater Installation & Operation Instructions

SECTION 7: HIGH LIMIT CONTROL (RESET BUTTON)

The sauna heater has 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.

To restart the heater, let the heater cool and turn the timer down to off, then push the reset button on the bottom of the heater, See the last drawing on Diagram 9 on page 14. If the high limit continually shuts off the heater, refer to Section about Troubleshooting.

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.
- Some sauna bathers enjoy the soothing effect of steam by splashing water on the heated sauna rocks. Use only one dipper full (approx. ½ cup) at a time and take care to keep clear of the steam as it rises off the rocks.
- Do not smoke, exercise or drink alcoholic beverages in the sauna room.
- Do not pour chlorinated pool or spa water on the heater or corrosion



Shower



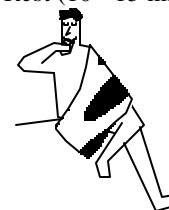
Sauna (10 - 15 min.)



Shower or swim



Rest (10 - 15 min.)



Relax with juice or water

Like it?
Do it again and
feel great.

"Digi II" Series Heater Installation & Operation Instructions

DIAGRAM 6

TYPICAL PRE-CUT WALL CONSTRUCTION

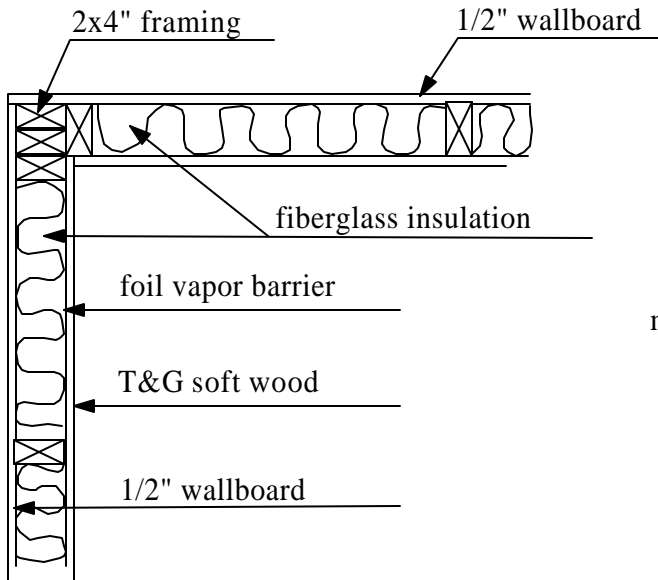


DIAGRAM 7

HEATER SCREEN (GUARD RAIL)

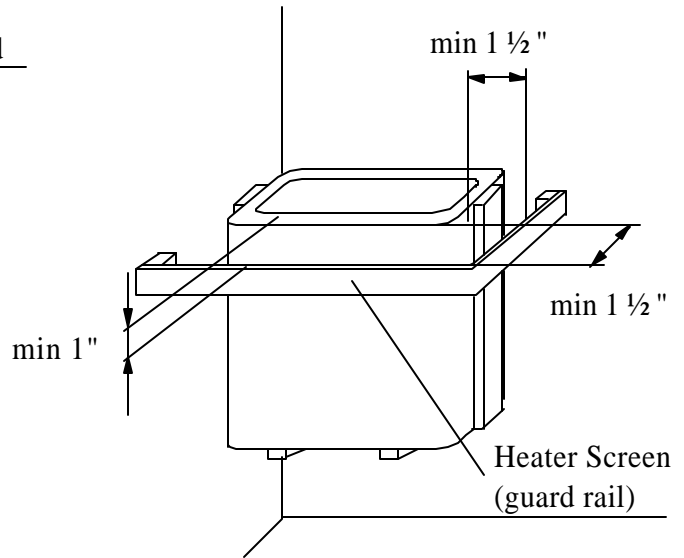


DIAGRAM 8

VENTILATION

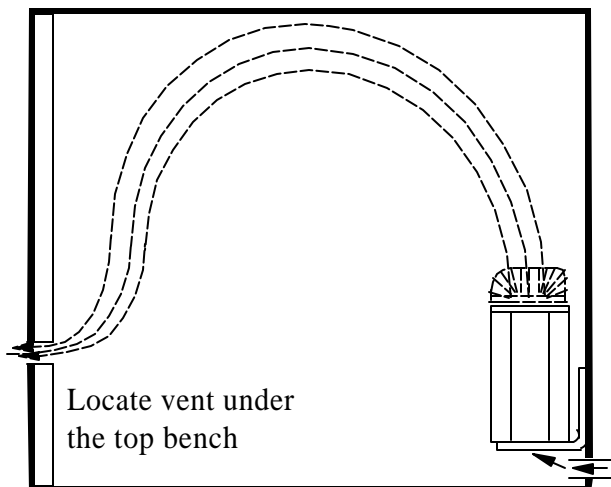
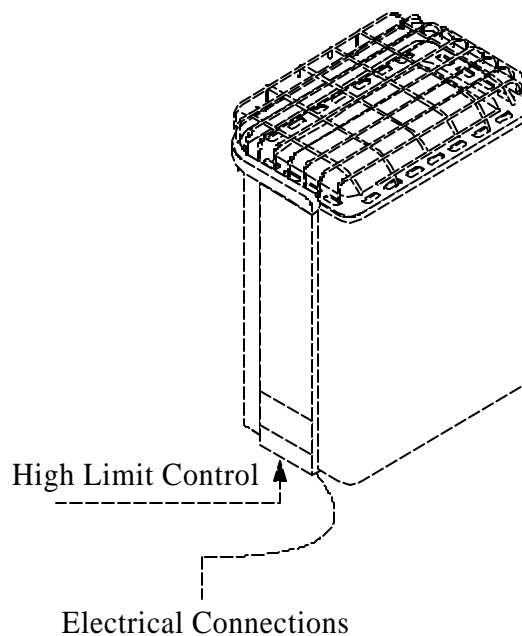


DIAGRAM 9

RESETTING HIGH LIMIT SWITCH



"Digi II" Series Heater Installation & Operation Instructions

SECTION 9: 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 10: 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.
- The warranty is void if a shower is 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.
- The heater should not be operated without its container properly filled with rocks and the rock guard in place.
- If an intercom speaker is installed, it should be away from the heater and as close to the floor as possible.
- If a room light is installed, it should be a surface mounted bracket type. Wall mounted lights should be about 70" above the floor. Ceiling mounted lights should be of an approved type with a junction box that is remote to the fixture itself. Use only a fixture that uses A.F. or fixture type internal wiring. A 60 watt bulb should provide sufficient lighting.
- Fire sprinkler systems installed inside any sauna room should be properly rated for sauna room temperatures.

WARNING

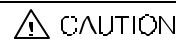
The "CAUTION" and "WARNING" placards must be mounted in accordance with Section 9.



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 Use Flammable 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.

"Digi II" Series Heater Installation & Operation Instructions

SECTION 11: VENTILATION

VENTILATION 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 8.

The minimum opening should be determined using one of the following formulas:

$$\text{For } R < 31, \quad V \geq 9.3$$

$$\text{For } R \geq 31, \quad V \geq 0.3R$$

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

SECTION 12: 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.

SECTION 13: TROUBLESHOOTING

For troubleshooting or service questions call 1-888-780-4427 and ask to speak with service. Prior to calling please have the Model & Type # available.

sales@saunatec.com
techsupport@saunatec.com