

## K3 & KT3 STEAM BATH CONTROLS FOR USE WITH AMEREC AK STEAM GENERATORS

### SAVE THIS MANUAL

FOR THE SAFETY OF YOU AND YOUR FAMILY PLEASE READ THE WARNINGS TO THE RIGHT AND ALL INSTRUCTIONS BEFORE USING YOUR STEAMBATH.

POST "WARNING" LABEL OUTSIDE STEAMBATH FOR SAFETY WARNINGS. REQUIRED POSTING ON DOOR OF STEAM ROOM OR ADJACENT TO DOOR FOR ALL COMMERCIAL INSTALLATIONS.

Thank you for purchasing your new AMEREC steam generator. If we can be of any assistance do not hesitate to call our Service Department at 1-800-363-0251 or 1-320-286-3500.

### SECTION 1: USING THE K3/KT3 WITH An AMEREC GENERATOR

The K3 and KT3 controls provide automatic temperature control with AK steam generators. These controls allow the user to set steam bath time and to adjust the bath operating temperature.

Note: For a temperature controlled steam bath, the AK generator requires either a KT3 with built in temperature sensor or a K3 with separate temperature sensor. Another K3 may be added to allow two controls for a steam bath, such as one inside the room and one outside, but *if a KT3 is installed it must be inside the steam room*. A maximum of two controls may be installed.

1. Ensure that both the power circuit and water supply to the generator are ON.
2. To activate the steam, press the K3 (or KT3) control's On/Off switch. In 10 to 20 minutes the room should be comfortable enough to begin taking a steam bath. The unit will turn off automatically in 30 minutes. Note: *other bath times and temperature may be set by the user.*
3. Remove clothing and jewelry.
4. Enter the steam room and close the door to prevent steam from escaping.
5. Relax and enjoy the warm steam releasing tense muscles and refreshing the entire body. The average time spent taking a steam bath is approximately 10 minutes
6. Pressing the control's on/off switch while the steam generator is operating will shut it off.
7. If your steam room has a shower, a pleasant experience can be achieved by taking a warm shower while in the steam. You will find the contrast from water to steam quite invigorating.

### WARNING

Electrical grounding is required on all Steam Generators.

All electrical supplies should be disconnected when servicing a Steam Generator.

All wiring must be installed by a licensed electrical contractor in accordance with local and national codes.

All plumbing must be installed by a licensed plumber in accordance with all applicable local and national codes.

Steamers are for indoor use only.

Steamers are not for space-heating purposes.

Be certain that steam bath enclosures are properly sealed to avoid water damage from escaping steam. It is recommended that 100% silicone caulk be used to seal all pipes and fittings. Steam must be prevented from escaping into the wall cavity.

Never shut off the water to an appliance that is in use.

Electric Shock Hazard  
High Voltage exists within this equipment.

There are no user serviceable parts in this equipment.

### WARNING

#### REDUCE THE RISK OF OVERHEATING AND SCALDING

1. Exit immediately if uncomfortable, dizzy or sleepy. Staying too long in a heated area is capable of causing overheating.
2. Supervise children at all times.
3. Check with a doctor before use if pregnant, diabetic, in poor health or under medical care.
4. Breathing heated air in conjunction with consumption of alcohol, drugs or medication is capable of causing unconsciousness. Do not contact steam head. Stay at least 12" away from hot steam escaping from the steam outlet.

### CAUTION!

#### REDUCE THE RISK OF SLIPPING AND FALL INJURY

Use care when entering or exiting the steam room, floor may be slippery.

NOTE: For additional safety instructions, see owner's manual.



**IMPORTANT SAFETY INSTRUCTIONS****1. READ AND FOLLOW ALL INSTRUCTIONS.**

2. **WARNING** - To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
3. **WARNING** - To reduce the risk of injury:
  - a. The wet surfaces of steam enclosures may be slippery. Use care when entering or leaving.
  - b. The steam head is hot. Do not touch the steam head and avoid the steam near the steam head.
  - c. Prolonged use of the steam system can raise excessively the internal human body temperature and impair the body's ability to regulate its internal temperature (hyperthermia). Limit your use of steam to 10 - 15 minutes until you are certain of your body's reaction.
  - d. Excessive temperatures have a high potential for causing fetal damage during the early months of pregnancy. Pregnant or possibly pregnant women should consult a physician regarding correct exposure.
  - e. Obese persons and persons with a history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a steambath.
  - f. Persons using medication should consult a physician before using a steambath since some medication may induce drowsiness while other medications may affect heart rate, blood pressure and circulation.
4. **WARNING** - Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal body temperature of 98.6 °F (37°C). The symptoms of hyperthermia include an increase in the internal temperature of the body, dizziness, lethargy, drowsiness and fainting. The effect of hyperthermia include:
  - a. Failure to perceive heat:
  - b. Failure to recognize the need to exit the steambath:
  - c. Unawareness of impending risk:
  - d. Fetal damage in pregnant women:
  - e. Physical inability to exit the steambath: and
  - f. Unconsciousness.

**WARNING** - The use of alcohol, drugs or medication can greatly increase the risk of hyperthermia.

**SAVE THESE INSTRUCTIONS**

## SECTION 2: OVERVIEW

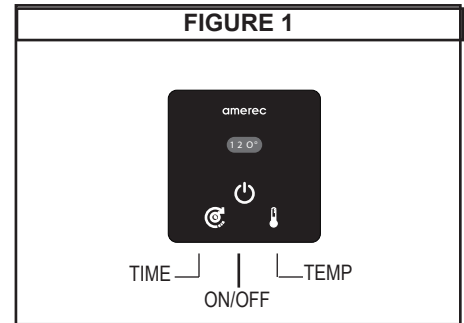
The K3 and KT3 steam generator controls feature adjustable bath time and temperature controls with a digital display. The actual room temperature and time remaining are alternately displayed every 5 seconds. The display also indicates error codes, if needed.

- The temperature can be adjusted from 84 to 125 °F (29 to 52°C) with an initial default of 120 °F (49°C). The temperature display preference may be set using a jumper on the steamer circuit board to select either °F (default) or °C.
- The maximum bath time may set to 60 minutes (default) or 24 hours (for light commercial use) using a jumper on the steamer circuit board.

**If a KT3 is installed:** The KT3 control must be mounted inside the steam room, approximately 4 feet up from the floor, as it contains the temperature sensor. A K3 control may be installed outside the steam room as a second control. Either control may be used to control the steam bath.

**If a K3 is installed without a KT3:** The K3 control may be mounted inside or outside the steam room, approximately 4 feet up from the floor. A second K3 control may be installed so one is inside and the other outside the steam room. Either control may be used to control the steam bath. Note: *when a K3 controls the steam bath without a KT3 installed, a separate temperature sensor must be installed in the steam room.*

**During a steam bath:** The "sequential steam" feature automatically changes heating levels depending on how close the room temperature is to the set point. When very close to the set point, heating is cut back to about 30% full power so the temperature remains more constant during use. If the temperature drops a few degrees, the heating goes up to about 60% of full power and if the temperature drops more full power is applied until the room heats enough to start reducing power again.



## SECTION 3: SETTING BATH TIME AND TEMPERATURE

The K3 and KT3 controls operate identically.

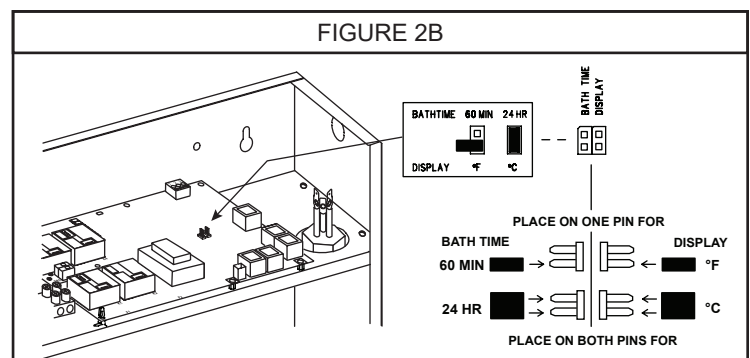
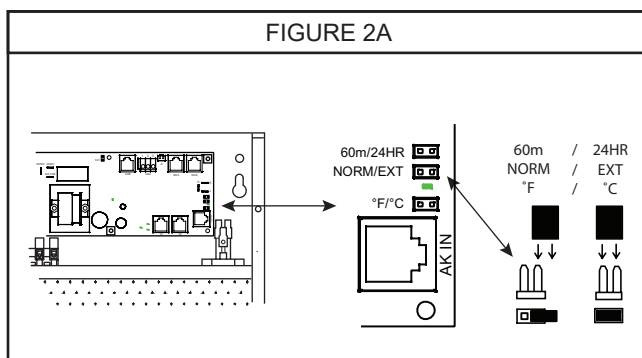
**Bath Time:** The default bath time is 30 minutes, adjustable from 5 to 60 minutes in 5 minute increments. A jumper on the steamer board may be set for a bath time settable up to 24 hours max. in 1 hour increments. To check the time setting, turn on the steam bath then press the TIME switch. The set time will immediately be displayed. Continue holding the switch for 5 seconds and the setting will begin to change. Continue pressing the switch and the TIME setting will step up until the highest set point is reached then step down to the lowest, then step up again. Release the TIME switch once the desired setting is reached. Whenever the TIME switch is pressed for more than 5 seconds, it will change to set mode and start to increase.

**Bath Temperature:** The default bath temperature is 120°F (49 °C), adjustable from 84 to 125 °F (29 to 52°C), adjustable in 1° increments. A jumper on the steamer board may be set to provide either a °F (default) or °C temperature display. To check the temperature setting, turn on the steam bath then press the TEMP switch. The set temperature will immediately be displayed. Continue holding the switch for 5 seconds and the setting will begin to change. Continue pressing the switch and the TEMP setting will step up until the highest set point is reached then step down to the lowest, then step up again. Release the TEMP switch once the desired setting is reached. Whenever the TEMP switch is pressed for more than 5 seconds, it will change to set mode and start to increase.

**Settings** will be kept until manually changed or until power is lost to the steam generator. *If power is lost, the settings will return to factory defaults but the 60 min/24 hr and °F/°C choices will not change unless their jumpers are moved on the circuit board.*

The jumpers for newer model AKs (built since March, 2017) are shown in Figure 2A, below. This model has its circuit board mounted on the back of the steamer.

The jumpers for older model AKs (built before March, 2017) are shown in Figure 2B, below. This model has the steamer circuit board mounted on the steamer shelf.



## SECTION 4: INSTALLATION

**1. TEMPERATURE SENSOR CABLE ROUGH-IN** *Required if using only a K3 (KT3 not installed)* The low voltage temperature sensor must be mounted in the steam room if a KT3 will not be used. Do not mount directly over the steam dispersion head or near the door. The sensor should be located in a wall 6" (150 mm) below the ceiling but no more than 7ft (2,1 m) above the floor. String the sensor cable from the sensor location through 1/2" (12 mm) holes in the wall studs or ceiling joists to the generator location. Drill a clean 7/8" (22 mm) hole through the steam room wall at the sensor location. Leave 12" (305 mm) of slack at the sensor location. See Figure 3.

Note: Do not staple through or damage cable. Use factory supplied cables only.

INSTALL THE TEMPERATURE SENSOR ASSEMBLY inside the steam room. A 7/8" (22 mm) hole should already be in the steam room wall with the cable ready.

- Carefully connect the sensor cable to the sensor. The cable end should slide into place and lock.
- Run a light bead of silicone around the back surface of the sensor and slide it into the wall with the metal sensor tube pointed down. Tape the sensor to the wall until the silicone has set-up.
- Connect the steam generator end of the cable to the sensor jack on the steamer's circuit board. See Figure 5 for the sensor jack location.

**2. K3 or KT3 ROUGH-IN** The low voltage controls can be mounted up to 25ft (7,6 m) from the steam generator. The K3 control may be mounted either inside or outside the steam room and the KT3 must be mounted inside the steam room so its built in temperature sensor will function. String the 25ft (7,6 m) cable from the control location through 1/2" (13mm) holes in the wall studs or ceiling joists to the generator. Note: Do not staple through or otherwise damage cable. Use factory supplied cables only.

Optional for tile rooms: a rough-in box may be installed at the desired control mounting location. A mounting plate with proper diameter hole and instructions is available. The plate mounts to a single switch/outlet box and the tiles should be finished over the plate and up to the hole edges to leave the control's mounting hole clear. (See Figure 4)

**3 INSTALL K3 or KT3 CONTROL** The low voltage K3 control can be mounted directly to a finished wall either inside or outside the steam room. *The low voltage KT3 control **must** be mounted inside the steam room.* See step 2 above. The control cable should already be roughed-in to this location.

Use a 1-3/8" (35 mm) hole saw, to drill a hole in the finished wall where the control is to be mounted (the control cable should already be roughed-in to this location). *This must be inside the room for KT3 controls.* Plug the cable end into the jack in the back of the control

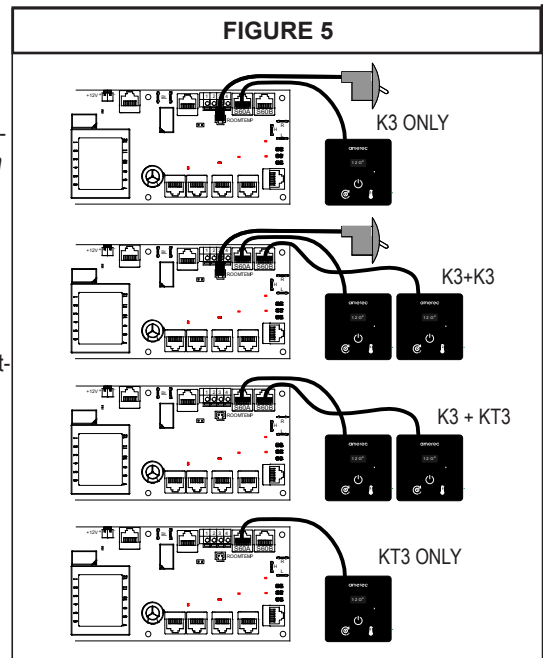
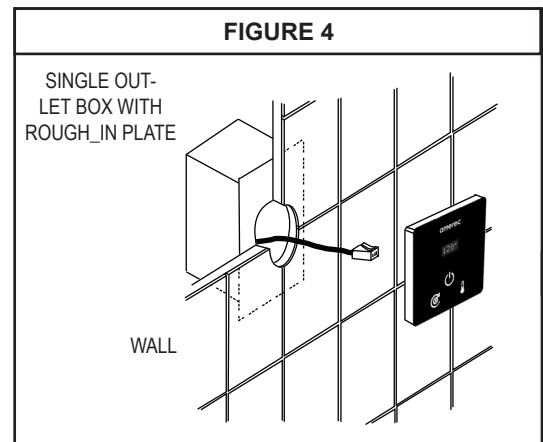
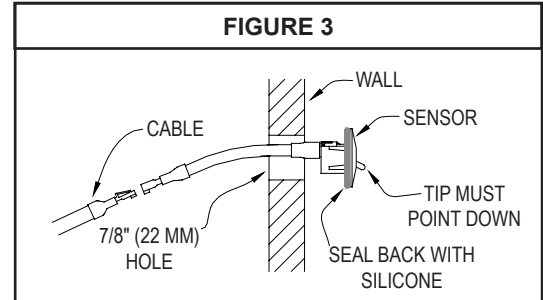
Run a bead of 100% silicone caulk around the tube on the back of the control. Make sure there is enough to fill any grout lines and make sure the silicone is far enough from the edges to remain hidden after mounting to the wall.

Make sure the cable is firmly connected to the control then insert the control's tube into the mounting hole and firmly press the control against the wall. Level the control and tape it in place (painter's tape generally works well), then leave until the silicone is cured.

Route the generator end of the control cable through a knockout in the end of the generator and secure it using the strain relief provided. Plug the control cable into its socket on the steam generator's circuit board (See Figure 5).

Note: for steam bath temperature control, a K3 and a wall mounted sensor or a KT3 (with built in sensor) must be installed. *Only one KT3 may be installed.* You may combine two K3s or a K3 with a KT3.

**4. OPTIONAL SECONDARY CONTROL** : As an option, a second K3 control may be installed with a K3 or KT3 to provide controls both inside and outside the steam room. The second control should be installed as described in above, with the second K3 control cable plugged into the second S60 connector.



## SECTION 5: TROUBLE SHOOTING GUIDE

The troubleshooting guide is meant as a general aid only. There are no user serviceable parts in the generator. All repairs should be performed by a qualified service person. For additional assistance or the factory authorized service person nearest you, call: AMEREC's Service Department at 1-800-363-0251.

SYMPTOMS	PROBABLE CAUSES	ACTION TO BE TAKEN
Control won't turn ON (Display is Off)	Improper or no power supplied or  Control improperly connected or Control cable faulty or Control is faulty	1. a. Make sure circuit breaker for generator is on b. Use a voltmeter to check the voltage across the two fuses on the Printed Circuit Assembly (PCA) in the generator. c. Check fuses; if a fuse is blown, replace. If the fuse blows again, <i>contact Support</i> . 2. Check that controls are installed per installation instructions. 3. Replace control cable. <i>Contact support</i> . 4. Replace control. <i>Contact support</i> .
Control OFF (Unit still makes steam)	Generator faulty	Turn off the circuit breaker then <i>contact Support</i> .
Water runs out of steamhead	Generator Faulty	1. Turn off the breaker 2. Turn off the water supply 3. <i>Contact Support</i> .
Steam room too hot or cold	Temperature setting needs changing	1. See section 3: Setting Time and Temp 2. <i>Contact Support</i>
Control ON, Displays >>>°	Steambath temperature over 132°F (55°C) or Sensor faulty	1. If the bath is too hot, turn off the circuit breaker and <i>contact Support</i> 2. Treat as E002
Control won't turn OFF (Display is ON)	Control faulty	Replace the control. <i>Contact Support</i>
Control ON (Display ON) (Time & Temp display properly) Unit Won't steam	Unit has not filled completely or Generator is faulty	1. Wait at least 10 minutes after turning on the control 2. <i>Contact Support</i>
Unable to adjust TIME or TEMP	Control faulty or Generator faulty	1. Replace control. <i>Contact Support</i> 2. Replace generator's PCA. <i>Contact Support</i>
Sudden increases in rate water sputters out of steam head	Contaminants in the water supply causing foaming	Flush tank at least 3 times - refer to Section 5: Maintenance
Control displays E001	Steam room temperature error code	Open sensor or sensor cable. <i>Contact Support</i>
Control displays E002	Steam room temperature error code	Shorted sensor or sensor cable. <i>Contact Support</i>
Control displays E055	Steam room temperature error code	Room too hot. <i>Contact Support</i>

**SECTION 5: MAINTENANCE OF YOUR AK STEAM GENERATOR**

The steam generator, steam head, fittings and plumbing connections should be inspected regularly for water leaks and damage. The AK steam generator is supplied with a manual drain valve for flushing sediments from the generator tank; an optional automatic electronic drain is available as an option. The autodrain option drains and rinses the bath after each use. If only a manual drain is available, the steam generator should be manually drained periodically following the Flushing Procedure shown here. This procedure should be scheduled monthly or more often depending on local water conditions and steam bath usage.

**Flushing Procedure:** *The generator should be cool before starting.*

1. Use the control to start a bath. Immediately go to the generator and open the manual drain (open is with the handle in line with the drain pipe, closed has the handle pointing straight out over the side of the pipe).
2. Allow the tank to drain for a couple minutes then close the drain and allow the tank to fill for about 1 minute.
3. Open the drain again and allow the water to run with the drain open for a full 10 minutes with the bath turned on.
4. Use the control to turn the bath off then go to the generator. When the water stops flowing out the drain, close the manual drain valve.

**amerec**

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