

We know manuals are boring. This one is really no different. We like to tell ourselves our manuals are nothing short of the most exciting thing you'll ever read. But they're not, they're kinda boring.

HOWEVER.....we do ask that you at least read and understand the Safety and Set-up portions. This gets you up to speed on how not to hurt yourself, other people or destroy your workshop. Truthfully, the rest of the manual has some cool little gems that should make your learning curve even more enjoyable.

If you have any questions after reading this manual please contact us at info@evenheat-kiln.com or 989-856-2281. We're more than happy to help.

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Cautions & Safety

Ceramic Kilns are as safe as any other electrical appliance when used under normal and proper operating conditions. To create and maintain this safe environment observe all safety precautions.

Warning Symbol Descriptions

Warning symbols are used throughout this manual. These symbols alert the operator to certain hazards and important information. Pictured below are symbols used along with a description of each.



Electric Shock Hazard

This symbol alerts you to potential electric shock hazards.



General Cautions and Information

This symbol alerts you to particular cautions, hazards and information.



Burn Hazard

This symbol alerts you to potential burn hazards.

Emergency Shut Off Provision



The kilns electrical power supply connection (plug/receptacle, breaker or disconnect) acts as the emergency electrical power shut off. Access to these devices should be unobstructed and with safe access at all times. To remove power from the kiln in an emergency situation do so by pulling the power cord plug from the receptacle or by throwing the breaker or power disconnect to the off position.

All electrical installations for direct wired models (those without a plug/receptacle connection) must include a power disconnect near the kiln and that is easily accessible and with safe access for emergency power shutoff. To remove power from the kiln in an emergency situation do so by throwing the power disconnect to the off position.

Electrical Safety



A licensed electrician should be used for all electrical installation and service. All applicable local, state and federal electrical codes must be followed.

Use correct voltage, wire size and fuse or breakers. Kiln electrical requirements are located on the kiln control panel nameplate and can also be found on evenheat-kiln.com. Make sure all electrical connections are tight. Avoid using aluminum wire.



Models RM2 810, HF 810 and RM2 1210 and must use "Fully Rated" 20A circuit breakers.

Always use the proper electrical receptacle. Never alter the kilns power cordset or power cordset plug. Alterations can be dangerous. Alterations will void any warranties along with nullifying any Listing Agency markings such as U/L or TUV.



Evenheat recommends that a voltage check be performed before placing the kiln into service, ideally before actual purchase. Operating voltage varies, with common operating voltages being 240V and 208V. The kilns operating voltage (printed on the kilns nameplate) must match the applied voltage (actual electrical service voltage). If it does not, do not install or operate the kiln as potential electrical and fire hazards exist. Contact Evenheat for guidance in such cases.

The kiln must be properly grounded.



Unplug or disconnect the kiln from the electrical service before accessing the chamber for servicing or vacuuming. Do not attempt to touch or replace the heating elements while the kiln is plugged in or connected to the electrical service. Electric shock may result in serious injury or death.

Never, ever use an extension cord to operate an kiln.

Kiln Location Safety



Do not place or use kiln on combustible surface.

Place only on the metal stand provided by Evenheat Kiln, Inc.

The surface on which the kiln is placed shall be capable of safely supporting the combined weight of the kiln, kiln load and any operating personnel.

Observe all building, fire and safety codes when installing the kiln.

Do not install the kiln closer than 12" (31cm) from combustible wall surfaces or object or 36" from any ceiling surface. This includes with the lid or door in the opened and closed positions as well as along its travel path.

If using a mobile stand the minimum of 12" clearance to any combustible wall surface or object must be maintained when the kiln is powered, in operation or when chamber temperature is greater than ambient room temperature.

Install in a covered, well ventilated area. Do not place the kiln in any structure resembling a carport or screened-in porch. Avoid areas that are subject to outdoors weather.

Never place the kiln in a small, enclosed area such as a closet, cabinet or very small room. The room in which the kiln is placed into service shall be capable of safely dissipating all heat produced by the kiln.

Never install a kiln outside. Avoid moisture.

It is the user's responsibility to be knowledgeable regarding any and all contaminants, produced by the ware during firing, and take steps to properly and legally contain and dispose of these contaminants.

It is the user's responsibility to provide ventilation capable of removing all gases, fumes and other airborne contaminants produced by the ware during firing safely from work the area and building structure.



Do not store flammable or combustible products near or in the same room the kiln such as gasoline, paint, aerosol cans, paper, curtains, plastics, etc. Better yet, store these items in another separate structure designed for this purpose.

Position the power supply cables, power supply conduit, controller cables, pyrometer thermocouple leads and other kiln control or power management items in such a way as not to create a tripping or tangling hazard.

The area around the kiln should be free of obstructions that interfere with the proper and safe operation of the kiln.

Never place anything under or above the kiln for storage. Absolutely nothing should be propped against the kiln.

Kiln Use Safety



The surface of the kiln is hot and burn injuries are possible. Keep all children and unsupervised personnel away. Always wear protective clothing, gloves and eyewear when operating and handling a hot kiln.



Do not insert any object or access the kiln chamber with any part of your body without first disconnecting the kiln from the power supply and chamber temperature is below 135°F (57°C). Electrical shock or burns may result in injury or death.

Protective clothing should be worn when operating the kiln and includes, but is not limited to, cotton clothing, heat resistant gloves and eyewear capable of filtering Infrared and Ultraviolet light.



Use care when looking into a hot kiln, this includes looking through a cracked lid or peepholes. **High heat escapes quickly and burn injury may result.** When looking into a hot kiln approach slowly and wear protective eyewear capable of filtering Infrared and Ultraviolet light.

Do not operate the kiln over the maximum temperature rating printed on the nameplate.

Do not operate the kiln with the lid or door open.

Never fire a kiln unattended beyond its anticipated firing time.

Never allow the power cord to touch the kiln. If the cord, plug or receptacle become damaged discontinue use and replace immediately.

Be sure that kilns' Lid Security Bar is secured before releasing the lid. The Lid Security Bar is used to hold the lid in the opened position and should be inspected periodically for damage and wear.

It is recommended that a fire extinguisher, capable of dousing an electrical fire, be accessible in the event of fire. Smoke detectors within the kiln room are also recommended.

Keep the lid or door of the kiln closed when not in use.



It is the user's responsibility to have knowledge of the material intended to be fired. If you are unsure as to the safety of firing a particular material contact your materials supplier for guidance. If you remain unsure as to the safety of firing a particular material do not do it. Firing hazards include materials that melt, explode or produce toxic gases. Finished ware hazards include glazes containing lead. Glazes containing lead should not be used for ceramic articles intended for food use.

Fire all ware according to the material manufacturer's instructions. Improper firing may result in damage to the kiln or ware.

Do not use the kiln to prepare food, heat a living space, dry clothes or ice laden articles or use as a storage devise. The kiln is designed for one purpose and one purpose only: the firing of ceramic materials.

A kiln will remain very hot long after the firing is complete. All safety recommendations should be followed, even with the kiln unpowered, to avoid any burn injuries. Keep children and other unauthorized personnel away.

Do not allow kiln to exceed the rated operating temperature indicated on the kiln nametag. To prevent kiln from exceeding this maximum temperature disconnect it from the electrical power supply.

When firing is complete, and during periods of non-use, remove power from the kiln by unplugging or by throwing the disconnect or breakers to the OFF position.

Your kiln may be equipped with a Power Interrupt Switch that is designed to automatically remove power from the heating elements when the lid or door is opened. Even with this added level of safety you must still turn the power off before accessing the firing chamber. No exceptions.

Kiln Maintenance Safety



Disconnect electrical power from the kiln before performing any kiln maintenance. Failure to disconnect electrical power supply may result in electrical shock which can cause serious injury or death.

Replace any worn, damaged or defective parts immediately with Evenheat Kiln replacement parts only. Replacement parts can be found on shopevenheat.com or by contacting Evenheat directly. Discontinue kiln use until parts are replaced.



When vacuuming the kiln use only HEPA filters on the vacuum. Prolonged expose to brick dust and other refractory materials can cause lung injury.

Inspect all electrical service connections periodically for wear. Special attention shall be paid to the plug/receptacle if your kiln is so equipped.

Periodically check lid band and jacket clamps for tightness. Tighten as necessary.

Intended Use

Evenheat ceramic kilns are a controlled heat source designed for the sole purpose of firing ceramic related material. Do not use the kiln for anything other than this intended purpose. It is the operator's responsibility to determine the suitability and safety of any material to be heated or fired. **Many materials are unsafe to heat and may explode or produce toxic gases and substances.** Please contact your materials supplier for guidance in the materials response to elevated temperature, suitability and required safety precautions. If you are not completely sure as to the safety of heating a particular material, don't do it.

Kiln Setup

There's a great list of kiln location information found above in the "Kiln Location Safety" section. Read it and follow it!

Stand Assembly and Kiln Placement

Your ceramic kiln was shipped with a kiln stand that must be assembled. Please refer to the stand assembly instructions included with your stand for proper stand assembly.

Once the stand is assembled, place the stand in the determined location and place the kiln on the stand, taking care to center the kiln on the stand.

Double check distances from the kilns exterior to the surrounding walls to verify at least a 12" (31cm) clearance in all directions as well as 36" (93cm) from the lid to ceiling in open position. Reposition if necessary to achieve the minimum distance.

Also double check kiln access. Is it unobstructed? Can the lid or door be operated easily and without obstruction? Is the plug/receptacle or disconnect, needed for emergency disconnect, easily and safely accessible? If the answer is no on any of these questions, reposition the kiln as needed.

Preparing the Peephole Covers

The peephole cover(s) installed on your kiln were fastened down for shipping purposes and must be loosened before use.

Using a ¼" tool, loosen the screw holding the peephole cover(s) ¼ turn. The peephole covers should now freely swing open and closed.



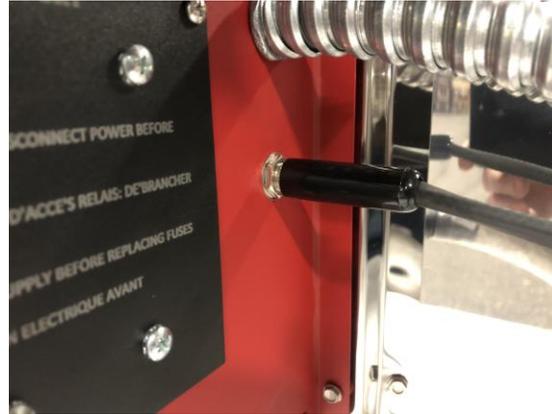
Peepholes function as a port in which to view into the kiln. When opened hot gases from the firing will escape quickly creating a burn hazard. When using the peepholes wear gloves capable of high temperature use and approach slowly with your face. Also wear eye protection capable of filtering Infrared and Ultraviolet light.



Power Interrupt Switch Connection

If your kiln is equipped with a Power Interrupt Switch you'll need to connect it.

Locate the power interrupt plug and insert it into the power interrupt jack located on the back of the control enclosure as shown below.



Temperature Controls

Our kilns are equipped with our Set-Pro, Rampmaster, Genesis or TAP temperature controls. Separate operating instructions have been included with your kiln. These instructions can also be found on evenheat-kiln.com.

Initial Use

We recommend operating the kiln empty before attempting any actual firings. There are a couple of good reasons for this. It builds up an oxide coating on the heating elements which helps to protect them. It also drives off any excess moisture and loosens any remaining brick pieces for removal. The pre fire also allows you to become familiar with the operating procedures of the kiln and controller.

Make sure the kiln chamber is empty, close the lid or door and program your controls for an 04 firing. This will take the chamber up to around 1800°F (982°C). See the included controls operating instructions for setting the firing schedule information.

During the firing take the opportunity to monitor the kiln as it proceeds through the firing. The electronic controls display chamber temperature along with other informative data. Watch how the kiln reacts to increasing temperature. Get a sense of the jacket temperature as the firing progresses (it gets hot). Get to know your kiln. As with all firings, monitor the complete firing operation.

As the kiln is heating you may notice a clicking sound along with an increasing chamber temperature, this will be true for mechanical relay operated models. This continual clicking sound is the mechanical relay(s) turning on and off.

Models fitted with our Quiet Drive Solid State Relay(s) will not make any audible clicking sounds during the firing except for a single click at the beginning of the firing.

You may also see and smell a light smoke coming from the firing chamber. This smoke is produced as lubricant (used in the winding off the heating elements) is burned off the heating elements. This happens early in the first firing and does not continue for long.

Once the kiln has reached temperature and the firing program finishes the control will go to the Idle or Standby condition (depending on control). The control is no longer running the program and is off. Before accessing the kiln allow it to cool to room temperature and throw the control power switch to the OFF position (0).

Loading the Kiln



Before loading or unloading the kiln all switches must be in the OFF position(s) and power to the kiln disconnected. Contact with heating elements or other electrically conductive components within the kiln can result in electrical shock causing injury or death.



Before loading or unloading the kiln the kiln should be cool, 135°F (57°C) or less to prevent burn injury.

Begin by placing 3 to 4 posts on the kiln floor. These posts will support a shelf and it's best to use ½" to 1" for this purpose. These posts allow for proper air and heat circulation throughout the kiln.

Place a shelf on the floor posts, place carefully to avoid contact with the kiln walls and thermocouple(s) (temperature sensor). Check for stability and reposition posts or add more posts if necessary.

Place your ware on bottom shelf. All ware that is placed in the kiln must be dry. Ware that is not completely dry may crack or explode causing damage to other ware, heating elements or firebrick. Slipcast greenware may be fired from several days to one week after pouring. Hand modeled pieces need more drying time, as much as a few weeks. Glazed pieces can typically be fired 6 hours after application. Consult with your materials supplier for guidance on proper drying time and procedures.

Most ceramic firings use multiple shelf layers separated by posts. To form additional shelf levels choose posts that are about ½" to 1" taller than any ware placed on the proceeding shelf. Use a minimum of 3 posts, with 4 being preferred. Once posts are placed, place in a shelf and check for stability and readjust or add more posts as necessary. Place your ware on the shelf.

When placing posts, shelves and ware in the kiln place them at least 1" (more is better) away from thermocouple(s). The thermocouple(s) respond to temperature and you'll want to give them room to operate. Ware located too close to these components can negatively affect the response of these components. Give them room!

Repeat loading procedure for all remaining shelf levels.

When loading is complete make sure that the lid or door will close without making contact with ware, posts or shelves. There should be at least 1" between all kiln ware and the lid or door.

The kiln is now loaded and ready to be fired.

Setting Up and Running Your Ceramic Firing Program

Once your kiln is loaded and the kiln lid or door has been closed it's now time to set and run your firing. Your kiln is supplied with the Set-Pro, Rampmaster, Genesis or TAP controls. A separate operators manual has been included with your kiln describing the use of these controls. The operators manuals for these controls can also be found on our web site evenheat-kiln.com. Your material and desired firing result will dictate the information you enter into the temperature control. This information should be available from your materials supplier.

Once you've determined your ceramic firing schedule, program it in and start your actual firing.

Your kiln may be equipped with covered peepholes. A general rule is to open the top peephole at the beginning of the firing and close it once temperature reach somewhere around 1000°F. It may be left open for firings up to cone 02. We suggest closing it for all firing higher than cone 02.

Your kiln may also be equipped with a ½" hole through the center of the lid. This hole acts as a vent of sorts and should remain open at all times and with all firing.

Periods of Non-Use

When the kiln is not in actual use, the power supply should be disconnected and all lids and doors should be placed in the closed position.

Do not store anything on or around the kiln at any time which also includes periods of non-use.

Mechanical Control Relay Replacement via the Relay Access Port

The kiln uses devices called mechanical relays to control power to the heating elements, or in the case of a solid state model mechanical relays are used for the safety relays.

Mechanical relays used to power the heating elements directly are expected to fail and will need replacement at some point. We don't expect the mechanical relays used as a safety in the solid state design to ever really fail. Time will tell.

To make servicing (replacement) of the mechanical relays as simple as possible we've provided an external, relay access port. The relay access port allows mechanical relay replacement by simply removing the access plate located on the outside back of the control enclosure. The Relay Access Port plate is labelled as such and simply requires the use of a Phillips screwdriver to remove and expose the relay. Once the relay is exposed it's very easy to change. It is highly recommended that you use an Evenheat factory replacement mechanical relay #11801.200. Replacement with non-Evenheat factory parts may result in improper operation.



Except for servicing, the relay access port plate must be secured to the control enclosure at all times. Do not operate the kiln without this Relay Access Port Plate in place and properly secured to the control enclosure. Failure to do so may result in electric shock resulting in serious injury or death.

Pyrometric Cones

Ceramic ware is most often fired to a "Cone" as opposed to a temperature. Your ceramic ware provider can provide guidance on which cone to use to for your specific ware.

Our controls are designed using the equivalent temperatures in the 108°F/Hour column.

Cone	Equivalent Cone Temperature at 27°F/Hour Heating Rate at End of Firing	Equivalent Cone Temperature at 108°F/Hour Heating Rate at End of Firing	Equivalent Cone Temperature at 270°F/Hour Heating Rate at End of Firing
022		1087°F - 586°C	1094°F - 590°C
021		1112°F - 600°C	1143°F - 617°C
020		1159°F - 626°C	1180°F - 638°C
019	1213°F - 656°C	1252°F - 678°C	1283°F - 695°C
018	1267°F - 686°C	1319°F - 715°C	1353°F - 734°C
017	1301°F - 705°C	1360°F - 738°C	1405°F - 763°C
016	1368°F - 742°C	1422°F - 772°C	1465°F - 796°C
015	1382°F - 750°C	1456°F - 791°C	1504°F - 818°C
014	1395°F - 757°C	1485°F - 807°C	1540°F - 838°C
013	1485°F - 807°C	1539°F - 837°C	1582°F - 861°C
012	1549°F - 843°C	1582°F - 861°C	1620°F - 882°C
011	1575°F - 857°C	1607°F - 875°C	1641°F - 894°C
010	1636°F - 891°C	1657°F - 903°C	1679°F - 915°C
09	1665°F - 907°C	1688°F - 920°C	1706°F - 930°C
08	1692°F - 922°C	1728°F - 942°C	1753°F - 956°C
07	1764°F - 962°C	1789°F - 976°C	1809°F - 987°C
06	1798°F - 981°C	1828°F - 998°C	1855°F - 1013°C
05-1/2	1839°F - 1004°C	1859°F - 1015°C	1877°F - 1025°C
05	1870°F - 1021°C	1888°F - 1031°C	1911°F - 1044°C
04	1915°F - 1046°C	1945°F - 1063°C	1971°F - 1077°C
03	1960°F - 1071°C	1987°F - 1086°C	2019°F - 1104°C
02	1972°F - 1078°C	2016°F - 1102°C	2052°F - 1122°C
01	1999°F - 1093°C	2046°F - 1119°C	2080°F - 1138°C
1	2028°F - 1109°C	2079°F - 1137°C	2109°F - 1154°C
2	2034°F - 1112°C	2088°F - 1142°C	2127°F - 1164°C
3	2039°F - 1115°C	2106°F - 1152°C	2138°F - 1170°C
4	2086°F - 1141°C	2124°F - 1162°C	2161°F - 1183°C
5	2118°F - 1159°C	2167°F - 1186°C	2205°F - 1207°C
5-1/2	2133°F - 1167°C	2197°F - 1203°C	2237°F - 1225°C
6	2165°F - 1185°C	2232°F - 1222°C	2269°F - 1243°C
7	2194°F - 1201°C	2262°F - 1239°C	2295°F - 1257°C
8	2212°F - 1211°C	2280°F - 1249°C	2320°F - 1271°C
9	2235°F - 1224°C	2300°F - 1260°C	2336°F - 1280°C
10	2284°F - 1251°C	2345°F - 1285°C	2381°F - 1305°C

EVENHEAT KILN, INC.
LIMITED KILN WARRANTY

Evenheat Kiln, Inc. guarantees to the original purchaser that for a period of two full years (one year for Evolution Series fiber lids) from the date of purchase the kiln will be free of defects in workmanship and materials when used under normal and proper operating conditions. Evenheat will replace or repair any defective part as specified..

FOR THE WARRANTY TO BE EFFECTIVE THE PURCHASE MUST:

- (1) Provide written proof of date of purchase. (Warranty card sent in at time of purchase.)
- (2) Notify the Evenheat Distributor/Dealer from whom the kiln was purchased, within 10 days after defect has been discovered.
- (3) Make kiln immediately available for inspection.

FOR WARRANTY REPAIRS:

- (1) Warranty repairs should be handled through the Distributor/Dealer from whom the kiln was purchased, who will arrange for any repairs or replacement of parts under the terms of this warranty upon receipt of the kiln (or defective part). Otherwise the defective part may be returned (postage prepaid) to Evenheat Kiln, Inc. P.O. Box 399 6949 Legion Drive Caseville, MI 48725. If, after factory examination, the original part is found to be defective, a new or repaired part will be shipped prepaid by Evenheat Kiln, Inc.
- (2) If the entire kiln is to be returned to the factory, all transportation costs will be borne but he purchaser. The purchaser should notify Evenheat Kiln, Inc. (989) 856-2281 prior to shipping. Evenheat will help advise the best shipping method and if it is necessary to return the entire kiln or only certain parts. Warranty work will be performed within 30 days after defective part is returned to the factory.
- (3) Evenheat Kiln, Inc. reserves the right, at its option, to replace the entire kiln or any part of it in order to fulfill its obligation under this warranty.

THIS WARRANTY DOES NOT COVER:

- (1) Freight damage, kilns altered in any way, abuse or neglect, moisture, improper storage or installation.
- (2) Kiln overfired (reaching temperature higher than melting point of ware inside kiln) regardless of cause.
- (3) Dawson Kiln Sitter or Limit Timer.
- (4) Kilns operated on incorrect voltage.
- (5) Improper electrical installation.
- (6) Kiln furniture or ware.
- (7) Kilns used for reduction or salt firing.
- (8) Kilns used for purposes other than the firing of glass materials.
- (9) Kilns operated in excess of the cone or temperature on the rating plate.
- (10) Damage to Property or personal injury that may occur from kilns that are fired on or near wood floors or combustibles.
- (11) Damage to property or personal injury that may occur from improper ventilation of the work area and building structure.

This warranty is in lieu of all other warranties, expressed, or implied.

Evenheat Kiln, Inc. neither assumes nor authorizes any Distributor/Dealer, Retailer or employee to assume for it any other obligations or liabilities in connection with Evenheat Kilns.

This warranty is limited as specified above and excludes incidental or consequential damages. Some states or providences do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.