



## Welcome to the Tiny Heirloom Family!

"Our vision is to innovate throughout every facet of the tiny industry and push far beyond where it's ever been. We have the building, design, and customer service expertise to do so – and a passion for putting people in their dream homes that will last a lifetime. We are Tiny Heirloom."

From our President and Co-Founder, Jeremy P. Killian

Our goal is to make your transition to our tiny homes an easy and comfortable experience.

We're so glad you are interested in our tiny homes and we hope to answer frequently asked questions that you may have regarding our tiny home. This FAQ manual will cover all the essential necessities of our tiny home models and help answer most frequently asked questions. Please feel free to contact us at [sales@tinyheirloom.com](mailto:sales@tinyheirloom.com) or call us at (503) 836-3934 for any other questions or customized requests.

**and remember.... "Home is where you park it"**



## TABLE OF CONTENTS

Trailers and Towing.....	Pages 3 to 5
Shipping.....	Pages 6 to 7
Exterior.....	Pages 8 to 9
Interior.....	Pages 10 to 11
Electrical.....	Pages 12 to 13
Plumbing.....	Pages 14 to 17
HVAC/Propane.....	Pages 18 to 21
Solar.....	Pages 22 to 23
Batteries/12v.....	Pages 24 to 25
Warranty.....	Pages 26 to 27
Parking.....	Page 28
Insurance.....	Page 28
Finance.....	Page 28
Certifications/Accreditations.....	Page 29

# TRAILERS & TOWING

When purchasing a Tiny Home RV/Travel Trailer, it is important to know which type of a trailer you will be using and how you plan to tow your new home. Because the trailer is the core foundation of your Tiny Home RV/Travel Trailer it must be able to safely carry the substantial amount of weight and meet proper load requirements. This makes it imperative to use a qualified “Tiny Home RV/Travel Trailer” manufacturer. Tiny Heirloom will work with you when you place your order to determine which trailer type will be best for you based upon what you want to have built and what vehicle you will use to tow your home with.

## FAQ

**Q1: What is the difference between a bumper pull, deck over, gooseneck, and/or fifth wheel trailer?**

A1: A bumper pull trailer is pulled behind any standard vehicle with a receiver and hitch and has fenders to case each rated axel and tire set. With a bumper pull trailer, you have the option to choose either a standard axle or a drop axle which sits lower than a deck over trailer. A deck over trailer is a bumper pull trailer as well and are made to where the axels and tires sit under the deck and trailer frame raising the overall height and there are no fenders. Both of these trailers are considered bumper pull trailers and tow behind a properly rated vehicle using what is called a receiver hitch. The most common ball size used for these two trailers for the hitch to receive too measures at 2-5/16”.

A gooseneck trailer is towed by having the coupler slide over the ball and hitch which is affixed over the rear axles of the towing vehicles rear bed. A fifth wheel trailer is towed similar to a commercial semi-truck and trailer where the fifth wheel attaches using a hinge plate affixed over the rear axles of the towing vehicles rear bed. Both of these trailers have a bottom main deck and then an upper top deck/platform used for additional square footage and storage. The overall preference for why someone would want to pick a gooseneck or fifth wheel trailer over a bumper-pull or deck-over trailer is for the larger unit size, towing and turning radius.



**Bumper Pull**



**Deck Over**



**Gooseneck/Fifth Wheel**

**Q2: How should I decide which type of trailer to build my tiny home on?**

A2: This will depend upon what vehicle you are planning to tow your Tiny Home RV/Travel Trailer with and the overall weight of what you are having built. Tiny Heirloom will work with you choosing your final build plan and guide you on which trailer will best work for your needs.

**Q3: Which tows best: a bumper pull model or a gooseneck/fifth wheel model?**

A3: This will depend on what vehicle you are using to tow with and your overall final trailer weight. A bumper pull has a universal receiver hitch and ball system that can be towed by most any and all trucks, but the overall towing weight limit is much lower than a gooseneck or fifth wheel trailer. A gooseneck or fifth wheel trailer can tow a lot more weight because the tongue rests over the tow vehicles' rear axle. Although most of the time these two trailers are more expensive and if you can swing the cost difference then we highly recommend a gooseneck or fifth wheel because of the improved towing capabilities and much more aggressive turning radius, along with larger floor plan square footage and overall better driving and handling experience when towing .

**Q4: What does GVW/GVWR mean?**

A4: Gross Vehicle Weight or Gross Vehicle Weight Rating, which states the maximum permissible weight of the vehicle or trailer when fully loaded for travel.

**Q5: How do I know how many axels and tire sets I am supposed to have and why does it matter?**

A5: Based on the GVW/GVWR weight of the trailer and home being built on top of the trailer weighs when completed will dictate the final axel size and count. Most trailers will come with a single axle, tandem axle, triple axle and quad axle option selection. Each axle will have a standard rating 5,100lbs, 7,000lbs and 8,000lbs. Most Tiny Home RV/Travel Trailers built are based off the 7,000lbs per axle weight and once you have your Tiny Heirloom team properly engineer and draw your tiny home trailer plans that is when the calculations are ran and the axle size and count is determined. If you over build and your axle size is too small or your overall all GVW/GVWR is heavier than the maximum rating the following can potentially happen:

- A. Possible chance the trailer can be turned over upon travel because the weight and balance ratios are off
- B. The trailer frame or axels can bow and fail, causing major structural damage and possible complete loss
- C. During any roadway travel of any kind and a police officer, state trooper or DOT inspector knows the trailer is over its maximum weight capacity could result in expensive fines, impound and or loss of license

**Q6: Do I need to have any special licensing to tow a Tiny Home RV/Travel Trailer?**

A6: If you have a State issued Class C driver's license and are towing for **personal use only** there are no other requirements, unless your specific State or jurisdiction requires special licensing for towable units over a specified weight class. Please check with your local State authorities for any further towing requirements.

**Q7: Can I obtain a registration and license plate for my Tiny Home RV/Travel Trailer?**

A7: Yes, if you use a builder like Tiny Heirloom who is registered, licensed and bonded as an RV/Travel Trailer Manufacture and is licensed and bonded dealership that follows all State and Federal guidelines then getting a RV or Travel Trailer State issued plate is no problem. All Tiny Home RV/Travel Trailer bought and built by Tiny Heirloom will be issued with a unique identifier known as a VIN number and an MCO (**Manufactures Certificate of Origin**) which is your proof of ownership and manufacturing representation. The MCO is turned into your States DMV/MVD department once issued by Tiny Heirloom and the home is built, inspected and completed and then a (**Live Title**) and State issued license plate for the Tiny Home RV/Travel Trailer is issued to you.

**Q8: What type of vehicles can I tow my Tiny Home RV/Travel Trailer with?**

A8: Although this is a tricky question, it will all depend on what the actual GVW or overall weight of the home is. We do highly recommend since most tiny homes weight between 10,000lbs to 20,000lbs that minimum a three-quarter ton or a one-ton pick-up truck be used. Here are some examples of trucks more than capable of towing a tiny home with: F-350, RAM 3500, or Chevy 3500.



**F-350**



**RAM 3500**



**Chevy 3500**

# **SHIPPING**

**When purchasing a Tiny Home RV/Travel Trailer, it is important to know what your options are regarding shipping. Details such as cost, planning the route, parking site, tiny home weight, and your vehicle/experience will determine how you take possession of your completed Tiny Home RV/Travel Trailer.**

## **FAQ**

### **Q1: Can I pick up my Tiny Home RV/Travel Trailer directly from my builder?**

A1: Yes, you can absolutely pick your Tiny Home RV/Travel Trailer up once it is completed and ready for delivery. This will be scheduled between you and Tiny Heirloom in advance once final QC (quality control) process has been tested and passed.

### **Q2: Can you ship a Tiny Home RV/Travel Trailer anywhere?**

A2: In most cases we can ship a Tiny Home RV/Travel Trailer most anywhere via land travel and we can even ship it overseas via ocean/marine freight. However, the buyer will be responsible for customs and imports rules and duties for International shipping along with any additional costs associated with the shipping.

### **Q3: What is the average cost to ship a Tiny Home RV/Travel Trailer via land travel in the United States?**

A3: Based on today's market rates it is safe to estimate a \$2.50 to \$3.50 per mile charge. This is subject to change due to fuel costs and will be discussed with Tiny Heirloom in advance. Any units wider the 8' 6" or 102" will be subject to special shipping and pricing requirement and possible permitting costs.

### **Q4: What is the average cost to ship a Tiny Home RV/Travel Trailer via ocean/marine freight?**

A4: Ocean/marine freight is based upon overall weight and size, because this is a very uncommon practice for shipping and specific to its destination. Please ask Tiny Heirloom in advance for pricing and logistic information. On average most ocean or marine travel typically ranges from \$5,000.00 to \$15,000.00 USD.

### **Q5: Is my Tiny Home RV/Travel Trailer insured during transportation/shipment?**

A5: Yes, Tiny Heirloom uses the best carriers who are fully licensed, bonded, and insured. If damage or theft were to take place it is the responsibility of the shipping company until it has been delivered to its final destination and signed for acceptance by the client.

If Tiny Heirloom uses its company vehicles and an insured and licensed Tiny Heirloom agent to tow the unit to the client, then Tiny Heirlooms movers and marine insurance policy will cover any damage or loss incurred until it has been delivered to its final destination and signed for acceptance by the client.

If the client chooses to pick up their unit directly and once the unit leaves Tiny Heirlooms physical property location and facility located at 9002 N. Sever Court Portland, OR 97203 then the unit is no longer insured or the responsibility of Tiny Heirloom or its affiliates.

**Q6: What is the average shipping time?**

A4: Land and the continental 48 states of the United States of America will depend on traffic and weather conditions along with overall weight and size. Once a unit leaves our facility plan that a typical shipment can range from same day if the destination is local. If the unit is going further, then 500 miles or more than a typical timeframe is from 1 to 7 days.

Ocean/marine freight is based upon overall weight and size. Shipping a home overseas is an uncommon practice and the details will be specific to the destination. If your unit will be delivered overseas, a shipping quote will be discussed with Tiny Heirloom in advance. This will include Hawaii and Alaska as well and typical estimated shipping timeframes are 15 to 45 days.



# **EXTERIOR**

**The exterior materials and finish are a fundamental component to the longevity and road worthiness of your Tiny Home RV/Travel Trailer. It is critical that we follow the proper standards and building practices to uphold the life expectancy of your unit.**

## **FAQ**

### **Q1: What siding choices do I have?**

A1: When picking siding it is vital for us to use rigid and structurally sound materials because a trailer frame is less rigid than a concrete foundation and our units are based off a residential platform. Standard exterior siding usually consists of shiplap, tongue and groove, or board and batten construction, and is usually made from composites, pine, cedar, or cement fiber board. There are a variety of other, less common material options that can be discussed with Tiny Heirloom.

### **Q2: How should I maintain my siding?**

A2: Maintenance will vary depending on the siding choices you make at the time of your order. Annual maintenance is always recommended for anything painted. For any natural wood product, we recommend that it is clear coated and sealed and/or primed and painted annually. If it is a metal product we recommend checking the neoprene fasteners and replacing them as needed. There is virtually no other maintenance required.

### **Q3: What maintenance is required for my doors and windows?**

A3: We recommend you repaint any painted doors every 3-5 years and clear coat or seal any natural wood doors minimum every 1 year. Windows and door flashing need to be checked for any cracks or leaks, and weep holes should be kept clear of any debris. It is recommended that screens be removed during transportation to prevent damage if they are mounted from the exterior side.

### **Q4: What type of window and door options do I have?**

A4: Depending on the build plan, Tiny Heirloom will work with you on a door and window schedule. Most windows are a double-pane tempered glass with vinyl casing. We also offer wood, metal, or fiberglass windows as alternative window choices. All doors are typically exterior rated metal or fiberglass, but wooden doors are also available. While single entry doors or slider doors are preferred, we can offer French doors or Bi-fold doors as well.

### **Q5: What type of vapor barrier is used to protect my Tiny Home RV/Travel Trailer?**

A5: We typically use Tyvek house wrap or a Gore-Tex weather guard house wrap on our base models. We have recently upgraded to Zip Systems.



**Q6: Do I need gutters for my Tiny Home RV/Travel Trailer?**

A6: Because a Tiny Home RV/Travel Trailer is mobile, Tiny Heirloom cannot offer any type of gutters. This is due to towing and width restrictions. However, if a unit is going to become stationary for a long period of time then we recommend you hire a licensed and bonded contractor for consultation and proper installation.

**Q7: What is the max legal width that my unit can be?**

A7: Per DOT (Department of Transportation) regulation, without special permitting your home is allowed to be 8'6" or 102" wide between the widest points. This includes tires and exterior light fixtures.

**Q8: What is the max legal height that my unit can be?**

A8: Per DOT regulation, without special permitting your home is allowed to be 14' or shorter. However, because of tire pressure and weight distribution we highly recommend and build our units at 13'6" tall from the bottom of the tire to the highest point. This includes solar panels and skylights.

**Q9: What is the minimum and maximum lengths that a unit can be?**

A9: Although there are no hard rules for how small your home can be, Tiny Heirloom offers homes from 10" to 45" long.

**Q10: What does THOW mean?**

A10: THOW is an abbreviation for Tiny House on Wheels.

**Q11: Can I remove the wheels off a Tiny Home RV/Travel Trailer?**

A11: No, you should never have the wheels removed because of the sheer weight of the unit. The wheels help with balancing and should work in conjunction with your leveling jacks and stabilizers.

# **INTERIOR**

**The interior of your unit is just as important as the exterior is. Making the right decisions in what material to use is vital to the longevity and road worthiness of your unit. Although we want you give you as many options as possible it is important that the appropriate materials are used.**

## **FAQ**

### **Q1: What interior wall cladding choices do I have?**

A1: When picking interior wall cover it is vital for us to use rigid and structurally sound materials because a trailer frame is less rigid than a concrete foundation and our units are based off a residential platform. Standard interior siding usually consists of composite, tongue and groove both v-groove and fine-line, board and batten, birch or sanded plywood construction, and is usually made from pine, Douglas fir, or cedar. There are a variety of other, less common material options that can be discussed with a Tiny Heirloom representative.

### **Q2: What type of insulating barrier should I use?**

A2: Typically, we use a 3" closed cell spray foam to insulate the wall cavities and ceiling joists. For the floor joist we use rigid foam board.

### **Q3: How should I maintain my interior wall covering?**

A3: Maintenance will vary depending on the interior wall covering choices you make at the time of your order. Annual maintenance is always recommended for anything painted. For any natural wood product, we recommend that it is clear coated and sealed and/or primed and painted annually.

### **Q4: What flooring options do I have for my Tiny Home RV/Travel Trailer?**

A4: When picking out flooring it is important to understand that because a Tiny Home RV/Travel Trailer is mobile, the flooring can shift and cause loose or tight spots. We highly recommend that the following options be used:

- A. Linoleum
- B. Marmoleum
- C. LVT (Luxury Vinyl Tile)
- D. LVP (Luxury Vinyl Plank)
- E. EVP (Engineered Vinyl Plank)
- F. SCV (Stone Core Vinyl)

- G. Although you do have other options for flooring these are the options that we can 100% fully back and warranty for mobile Tiny Home RV/Travel Trailer use. We will install upon request other flooring options such as hardwood and tile, however we cannot warranty the longevity of these options.

**Q5: How do I best maintain my flooring? How do I clean my flooring?**

A5: For all flooring we highly recommend that all water and debris be spot cleaned immediately to prevent any possible damage. For complete home cleaning, a damp rag or sponge is preferable to a mop. Using specific flooring cleaners will be based on your flooring type:

- A. Engineered/ Laminate Flooring: We highly recommend that you use a floor cleaner based on the manufacturer's suggestions.
- B. Tile, granite, marble, quartz, or any kind of natural stone: Depending on the circumstance we highly recommend that you use a nonabrasive natural stone cleaner. We always recommend that you seal natural stone at least once a year.

**Q6: What do I do if one of my appliances has an issue or stops working?**

A6: When you purchase a Tiny Home RV/Travel Trailer through Tiny Heirloom you will be provided the manufacturer's manual and warranty cards for all of the appliances. Familiarize yourself with the manual, as it will contain basic troubleshooting steps. If there is an issue or concern related to the function or construction of the appliance you will need to contact the manufacturer directly for further assistance or repair. If it is an issue with the installation of the appliance, as long as it falls within our limited 1-year warranty we will fully cover the repair. If the warranty has expired, we will send you an estimate based upon the cost of the repair and/or replacement.

**Q7: What are the most common reasons for my appliance to have an issue/stop working?**

A7: Depending on the appliance the most common solutions are:

- A. First check the appliance itself: Verify the main power switch, settings/controls and integrated breakers are in the correct state. Turn it off, wait a few seconds, then turn it on again.
- B. Next, check the circuit breaker or the GFCI plug the specific appliance is connected to see if it is tripped and needs to be reset (please refer to page 13-14).
- C. Finally, if it is a gas/LP appliance please check the propane tanks and make sure they are not turned off or empty (please refer to page 20 for details).

**Q8: What is the best way to maintain your FF&E (Furniture, Fixture, & Equipment)?**

A8: When maintaining your FF&Es we highly recommend familiarizing yourself with the manufacturer's manual, which contains maintenance and care information. We also highly recommend using the manufacturer's suggested replacement parts (e.g., if an LED bulb burns out, replace it with the same wattage and style as the original). Make sure all your mounting points are securely fastened, especially before and after travel. Keep appliances clean and free of debris, including emptying lint traps. The best thing to do is to keep a watchful eye and maintain your unit.

# ELECTRICAL

Your Tiny Home RV/Travel Trailer will come with either a 30-amp or 50-amp main power service. Tiny Heirloom will work with you to decide which service will be needed according to your load profile. This is a list of all appliances you have selected for your Tiny Home RV/Travel Trailer, how much energy they consume, and how long you expect to use them on any given day. Most RV parks, KOA (Kampgrounds of America), and campgrounds will provide a standard 30-amp service, and some will offer upgraded 50-amp service. Electrical load will depend on what appliances, lighting choices, electrical amenities, and entertainment packages you may select.

## FAQ

### **Q1: How do I hook up my electrical service?**

A1: We will supply you with a standard 30 or 50 amp RV power cord. This cord will be the lifeline that connects the Tiny Home RV/Travel Trailer to a power source. All Tiny Home RV/Travel Trailer will have a covered service outlet located on the rear driver side of the unit with the required amperage clearly marked. The power cord should ideally be plugged into a designated outlet of the appropriate amperage, but an adaptor for a standard wall outlet is also available. Some circuits may not function if the unit is not plugged into an appropriate outlet.



**Power Inlet**



**Power Cord**



**Power Inlet Location**

### **Q2: What is the main electrical service panel?**

A2: There will always be a clearly marked main service panel located in an inconspicuous but convenient location inside your unit. This holds all the circuit breakers, which connect or disconnect the individual circuits throughout the home. For example, the bathroom outlets and lights may be on one circuit, the interior lights may be on another circuit, and heavy appliances usually have their own dedicated circuits. If an electrical device experiences some sort of fault, the circuit breaker may trip and disconnect the circuit to prevent further problems.

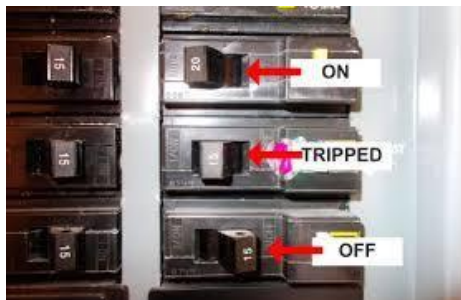


## Main Service Panel

### Q3: What do I do when part of my electrical service is not working?

A3: First, check your GFCI plugs (often located in the kitchen, bathroom, and on the exterior – anywhere that an outlet may get wet) to see if they have been tripped. If a GFCI (ground fault circuit interrupter) gets wet or otherwise experiences a ground fault, it will trip to prevent damage to you and your Tiny Home RV/Travel Trailer. Press the “RESET” button on the outlet to reset the breaker. It may need time to dry before it will remain operational. Be aware that one GFCI will protect the entire circuit - if any outlet on the circuit experiences a ground fault, the entire circuit will be disconnected.

Next, check your main service panel to see if any sub breakers have been tripped. A breaker may not appear to be tripped – switch it completely off and then back on to be certain. Tripped breakers may mean you have overloaded the circuit with excessive loads. To prevent this, spread your loads out among different circuits, limit the use of power strips, and turn off any loads you are not using.



**GFCI**

**Individual Labeled Breakers**

### Q4: What do I do when all my electrical service is not working?

A4: First check the main breaker in the service panel – this disconnects the entire panel from the power source. If turning it off and on again does not restore power, next check that the main power cord outside is securely connected to the receptacles on both ends. Next check the service panel on the power source, if available to you. For example, if you are plugged into a standard residence, the individual circuit that your Tiny Home RV/Travel Trailer is plugged into may have been tripped. If you are plugged into an RV park service, you will likely have to contact the park staff. If none of these solutions fix the issue, we recommend consulting a licensed electrician. For residents located nearby Portland, Oregon or surrounding area Tiny Heirloom can provide a referral if necessary and may be able to provide an electrician with Tiny Home RV/Travel Trailer specific experience.

# PLUMBING

Almost every RV uses plumbing in one way or another. It is vital that a Tiny Heirloom Team Member goes over the necessary plumbing requirements for your Tiny Home RV/Travel Trailer. Most RV units will have a fresh water source from either a holding tank or a water bib inlet. Water usage and flow will all depend on what amenities are being used in your unit. For freshwater tanks, a water pump is necessary to create the required pressure.

## FAQ

### **Q1: Where do I locate my water hook up?**

A1: There will be an exterior bib inlet located on the driver side near the rear of the unit or it will be placed somewhere on the back end of the unit. This will be marked water inlet.



### **Q2: What is the best method to hook up my water?**

A2: We highly recommend using an exterior rated insulated and/or heated water hose that directly connects to the bib inlet of the unit. Unless otherwise specified at the time of the order the client is responsible for purchasing a hose.



**Exterior Rated Insulated Hose**



**Heated Water Hose**

### **Q3: Do I need tanks and what are they used for? How big are my tanks?**

A3: Holding tanks store your fresh water, grey water, and black water. Black water is waste water exclusively from the toilet, while grey water is usually dirty/soapy water from all other drains. Fresh water tanks store fresh water to be pumped into the unit. Not all tanks are required, but if you are going to be traveling or parked at a location that does not have a water source, it is recommended that your unit have a fresh water tank. Grey water tanks can be avoided if you are able to drain the water directly without harming the environment – check with your local code to determine where you can drain. Black water tanks can be avoided with composting, dry-flush, or direct sewer drain

toilets. Temporary roll-away tanks are also an option. The size of the tanks will be determined by the water usage in the home.



**Clean Water Tank**

**Grey/Black Water Tank**

#### **Q4: Where are my tanks located and how do I clean out my tanks and drain my system?**

A4: Your tanks will always be located underneath the unit. The clean outs will be visible from underneath the driver side of the unit. The most common way to clean out your tanks is by using an evacuation method. Most campgrounds, KOAs, or RV parks provide a waste clean out location. This is usually a direct connect hose that will connect to your individual tanks and evacuate its contents. **DO NOT CROSS-CONTAMINATE** your black water clean out from your grey or fresh water clean out. If you are going to be living in a local community or property and do not have a clean out station, we recommend that you set up a service with your local sanitation/waste company. Another option is to use roll-away tanks.



**Clean-Out Location**



**Clean-Out Hook Ups**



**Tank Diagram**

#### **Q5: What are roll-away tanks?**

A5: Roll-away tanks are a great option for both stationary and/or mobile units. They are used the same as your standard tanks. The benefit of having roll-away tanks is versatility, of going from a direct sewer connection to becoming mobile and needing a temporary waste solution. You can also hook up your grey water and easily be able to disconnect and roll out the full tank for disposal. This gives you the flexibility to have multiple tanks and holding capacity that you can switch out from when needed.





**Q6: What are tank monitors and what is their purpose?**

A6: Tank monitors are used for displaying the fluid levels in your tanks. We use them to help avoid overfilling by alerting you when a clean out is needed. The monitors themselves are usually located in the tongue box or inside your unit. These monitors will be clearly marked so you can locate them easily and regularly. It is important to know that your monitors will need some time to calibrate/adjust so do not be alarmed upon initial use if there is a false reading. As they are used on a regular basis the readings will become more accurate.



**Q7: Why do I have a water pump and what is it used for?**

A7: The water pump is crucial in any RV unit that has a water source as this is what creates proper water pressure and flow of water.

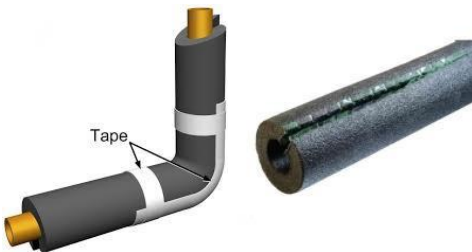


**Q8: What do I do if I'm getting low or no water flow and how do locate the water pump?**

A8: If your water pressure becomes extremely low or nonexistent please check that you are getting electricity to the water pump itself. Contact Tiny Heirloom to locate your water pump, most likely the pump will be located in one of three locations: A) alongside your water tanks on the exterior of the unit, B) in the tongue box or C) within lower kitchen cabinets. In the event that the water pump is not working, this is covered under your 1-year warranty plan. Please contact Tiny Heirloom so this can be replaced. Finally check for leaks, clogged, cracked, or deviated water lines by checking for puddles and having a licensed plumber check the lines.

**Q9: What do I do to prevent freezing?**

A9: It is important to add foam pipe insulators to any exposed piping underneath the unit. This is the responsibility of the RV unit owner. We highly recommend when using a fresh water hose to purchase a heated hose (if possible) and/or a well-insulated hose. Please make sure all your connection points are properly closed if not in use. Tiny Innovations will work with their clients and decide if adding insulated tank warmer will be necessary upon purchasing of unit.



### **Q10: Can I hook up to a sewer service?**

A10: Yes, this is something that will need to be discussed in detail upon the purchase and building of your unit as there are a couple different ways for you to hook up to a sewer service. The client will be responsible to contact their local building division and contractor to set this service up. Tiny Heirloom will be responsible to install the proper toilet and point of sewer connection within the unit.

### **Q11: What toilet options do I have?**

A11: You have several toilet options available to you. Here are the most common options that Tiny Heirloom recommends:

- A. Composting toilet: this uses its own internal containment compartment within the unit to eliminate black water waste and prevent additional water waste for both on and off-grid purposes. Some models can be converted from a composting toilet to a direct sewer-connected Flush toilet.
- B. Dry-Flush toilet: this is a completely waterless system which uses bagging for containment of waste. This is used for both on and off-grid purposes as water waste prevention.
- C. Incinerating toilet: this toilet is another waterless option used for both on and off-grid and is a bagging system that will incinerate all waste to ash. Please note there is a small ash odor as the waste is burned.
- D. Macerating toilet: this toilet is used for both on and off-grid options however this will require a water source. This toilet will break up the contents into smaller particles that will go into a black water tank for easy draining.
- E. Dual flush toilet: this is standard residential toilet that must be used with direct black water hook up or sewer connections only.



**Composting Toilet**



**Dry-Flush Toilet**



**Incinerating Toilet**



**Macerating Toilet**



**Dual Flush Toilet**

### **Q12: What bathing options do I have?**

A12: The main two bathing options are a standing shower or shower tub combo. We highly recommend a standing only shower because the water flow rate is much lower than a standard residential home. A tub will have issues keeping a constant hot water flow because of the low flow rate which will result in having a lukewarm bath. We are able to bypass this issue by having a second hot water tank installed for singular bathtub use.

# PROPANE/HVAC

Propane is the natural gas more commonly known as LP service to your RV unit. Tiny Heirloom works with CCB licensed HVAC subcontractors to install all necessary propane/LP lines and valves. This is essential for most RV units especially when going off grid. It allows us the ability to split the electrical load by giving us the option to use propane-based appliances and more important heat source. An HVAC contractor is essential when needing to use a mini-split system in your unit. They are the one to run the condenser line set and make sure the AC function works adequately.

## FAQ

### **Q1: Where are my propane tanks located?**

A1: Most likely your propane tanks will be located in the front tongue box and/or on the tongue directly. Although you can create a sub housing structure to store your tanks, you will never keep them inside the actual RV unit other than those locations.



### **Q2: What is a propane regulator?**

A2: A propane regulator is an indispensable tool used to regulate the pressure that the tank flows to the lines. It also allows you to hook up the auto-exchange switch from tank 1 to tank 2 without interruption to service.

### **Q3: Where do I locate my shut off valves?**

A3: All shut off valves will be located directly behind any propane/LP based washer/dryer from the connection point or directly from the propane source located from the tanks themselves.



**Q4: What appliances can be used from propane/LP?**

A4: You can use a cooktop, oven, refrigerator/freezer, and hot water heater.



**Furrion Gas Cooktop/Stove      Furrion Induction Burner**

**Q5: What heat sources can be used from propane/LP?**

A5: Cadet and marine grade fireplace.



**Cadet      Marine Grade Fireplace**

**Q6: What is a mini split?**

A6: A mini-split is a three-in-one system that will allow for heat, fan only, and Air conditioning. This is an all-electric unit and will require a 30 to 50-amp service to properly operate.



**Mini Split Heat and AC Pump**

**Q7: Where does the head unit of a mini-split mount, and where does the condenser mount?**

A7: The head unit mounts somewhere centrally inside your unit, usually above your front door way or upper windows to allow for proper airflow. The condenser will almost always be located on the backend exterior of the unit. It is okay to have a housing cover over the condenser if it is properly mounted and ventilated.



**Head Mount**



**Condenser**

**Q8: Where is the main shut off switch for a mini split located?**

A8: The main shut off is located in a metal box on the exterior of your unit next to the condenser. This will provide all necessary power to the mini-split system and is controlled with an on/off lever.



**Mini Split Main Shut Off/Disconnect**

**Q9: Where do I locate my on-demand gas/LP water heater if I have one?**

A9: Typically, the on demand hot water heaters are located near the front driver's side, tongue box, however sometimes they can be located towards the mid-point or rear of a unit. Please consult Tiny Heirloom for your specific unit so that you know where it is located at all times.



### **Gas/LP Water Heater Location**

#### **Q10: What do I do if my hot water heater goes out or stops working?**

A10: We highly recommend that you first check the circuit breaker if it has been tripped. Secondly check the propane tanks or levels to make sure it is properly feeding gas to the heater, next check for a gas leak. Finally, if there is a direct issue or concern related to the appliance itself you will need to contact the manufacturer directly for further assistance or repair.

#### **Q10: What do I need to do in the event that I smell gas or have a leak?**

A10: Please contact Tiny Heirloom and/or your local HVAC contractor. We ask you to please make sure that you shut off your propane tank valves until the issue has been resolved.

# SOLAR

Solar is a great energy source option for living on or off-grid. It's clean, green, and sustainable. Tiny Heirloom will build a "load profile" with you, this is a list of all appliances you have selected for your Tiny Home RV/Travel Trailer, how much energy they consume, and how long you expect to use them on any given day. If you or your family consume a lot of electricity daily (especially water and space heating), it may not be possible to run your home entirely on solar. If you plan to live off-grid, we will also discuss how many days of battery backup you will need in case the sun isn't shining. This is crucial information needed for determining the size of the solar components because tiny homes have the limited roof space for mounting solar panels. The most effective systems work in unison with batteries to store energy, propane appliances to reduce the electrical load, and a gas generator as a backup power source.

## FAQ

### **Q1: How does solar work? What are the components involved?**

A1: In short, solar panels harvest energy from sunlight. A "charge controller" manages that energy and feeds it into an inverter. The inverter directs all energy between the charge controller, shore power/city/RV electrical grid, batteries, and the home's electrical system.

High quality inverters have management systems that will power the home in order of sustainability – using energy currently being produced by the solar panels first, then use the batteries until they are drained to a certain point, and then it will use shore power/city/RV electrical grid, if available. If the solar panels are producing more energy than is being consumed, the extra energy will be stored in batteries. If the batteries are low and there is no sun, it will use shore power to run the home and charge the batteries. Not all systems have all these features, but Tiny Heirloom will work with you to find the best product for your unit.



**Charge Controller**



**Solar Inverter**



**Lithium Ion Battery**



**Q2: How much will it cost?**

A2: This will depend entirely on your electricity load. On average, expect to spend anywhere from \$15,000-\$30,000 for an effective system. There is no maximum to how much you can spend as you will first run out of physical space for batteries and panels.

**Q3: What are the limitations of solar?**

A3: The two biggest limitations of solar are usually budget and space. Solar systems work best when they are exposed to lots of sun every day, which includes optimizing the exposure. When the sun is highest in the sky there should be no shade on the panels and they should be pointed and tilted directly towards the sun. As the components for solar are large and heavy they impose unique physical constraints due to the limited space on Tiny Home RV/Travel Trailer. This is compounded by the fact that a small solar system will take many times longer to pay itself off as compared to a traditionally sized residence that can fit 30+ panels on the roof. Extreme cold has adverse effects on batteries, causing them to not charge effectively and die prematurely.

**Q4: Why is my solar system not working? I have no energy**

A4: Each system is unique and complicated - familiarize yourself with the manuals so you can learn how to read the displays, where the breakers are located, and other manufacturer recommended troubleshooting steps. Unless you have read the manuals and are comfortable making changes, it is not recommended that you change any settings. If there is a direct issue or concern related to the solar system you will need to contact the manufacturer directly for further assistance or repair. Tiny Heirloom will also provide a quick-reference guide for everyday use of your solar system.

The most common reason an off-grid system fails is overuse of electricity. Therefore, it is very important that we build/ a "load profile" with you. If there is too much energy being used in the home, the batteries may be drained faster than the solar panels can fill them up.

For all troubleshooting, the first thing you should check are the several breakers, as they can trip for various reasons. Turning these breakers all the way off and on again may fix the issue if the original cause does not persist.

If resetting the breakers does not work, it is recommended that a certified electrician experienced in solar inspect the system. Solar systems use a combination of high and low voltage, each with their own dangerous properties. It is not recommended to open the components - you can be seriously injured or killed. If there is a direct issue or concern related to the solar system you will need to contact the manufacturer directly for further assistance or repair.

## **BATTERIES/12v**

**Almost all Tiny Home RV/Travel Trailer use low voltage (12-volt DC) electronics. This can include the gas oven pilot light, gas water heater pilot light, holding tank monitors, tongue jack, propane sensor, auxiliary water pump, interior/exterior LED lights, and more. There are two ways that these can be powered:**

**Battery** – A sealed, deep cycle 12-volt battery is often used to provide power to these systems even when the home is not plugged in to shore power. This is useful for camping where there is no power or if you do not want to run a generator at all times. The battery would be charged by a battery charger when plugged into shore power.



**Optima Blue Battery**

**Converter** – A converter plugs into a standard home outlet and supplies low voltage. It requires the home to be plugged into shore power/city/RV electrical grid and is ideal for homes that are parked long-term.



**Converter**

## **FAQ**

### **Q1: Which low voltage system is right for me?**

A1: If you plan to travel a lot, a battery is ideal. As long as the battery still has a charge, you can have hot water anywhere, raise and lower the tongue at the push of a button, and cook with a propane oven. If the home is going to be parked and plugged in most of the time, a converter is more reliable and economical.

**Q2: What kind of maintenance and care does a battery require?**

A2: Like a car battery, the main consideration is to not drain the battery. Draining the battery can cause irreversible damage. Heavy equipment like a tongue jack requires a lot of power, so it should only be used as sparingly as possible. Lights must be turned off when not in use. Most other low-voltage electronics require a very small amount of power. As with a car battery, it will need to be replaced after a few years. Lastly, batteries do not perform or charge well in extreme temperatures. If you will be in a very hot or cold climate, Tiny Heirloom will work with you on how to appropriately insulate the battery compartment.

**Q3: How do I know when to replace a battery? How do I replace it?**

A3: If the lights are dim, low-voltage electronics respond sluggishly or not at all, and the battery has had ample time to charge, it may need to be repaired or replaced. If you use a voltage meter on a charged battery, a healthy battery will be over 12 volts and an unhealthy battery will be below 11.6 volts. Whether it needs repair or replacement, the battery needs to be removed. Tiny Heirloom installs batteries in convenient locations, we highly recommend calling your local mobile RV mechanic to repair or replace it.

**Q4: What kind of battery do I need?**

A4: Almost any 12-volt battery will work in a pinch, with the most common being car batteries. "Sealed" or "Maintenance-free" batteries are ideal because it means it produces no harmful gasses and no water needs to be added periodically – this is the standard technology these days. "Deep-cycle" batteries are ideal because they can be used for a long time before damage occurs. "Lead-acid" batteries are very common, but an alternative class of "Lithium" batteries are superior in every way – the only downside to lithium batteries is a higher cost.

**Q5: What kind of maintenance does a converter require?**

A5: Very little maintenance is needed, make sure it's free of dust and has adequate ventilation.

**Q6: How do I know what the low-voltage electronics in my home are?**

A6: Tiny Heirloom will provide a customized manual for all your low-voltage electronics, including any information needed to perform basic service. If there is a direct issue or concern related to the appliance itself, you will need to contact the manufacturer directly for further assistance or repair.

# **LIMITED LIABILITY WARRANTY**

We proudly offer this Limited Liability Warranty for each of our Tiny Heirloom Tiny Home RV/Travel Trailer.

## **WHAT THIS LIMITED LIABILITY WARRANTY COVERS:**

We warrant each "Tiny Home RV/Travel Trailer" for:

- One (1) year from the date of original purchase against defects in material and craftsmanship/workmanship;
- One (1) year from the date of original purchase against system and mechanical defects;
- One (1) year from the date of original purchase against structural integrity failures;

If during these period(s), your Tiny Heirloom "Tiny Home RV/Travel Trailer" is determined to be defective following our inspection, we will repair the defect at our sole discretion. These are the exclusive and sole remedies available under this warranty.

This warranty is not transferable to any third party.

## **WARRANTY EXCLUSIONS:**

The limited liability warranty above is your exclusive and sole legal remedy against Manufacturer.

The limited liability warranty does not apply to any product failure, defects, property damages or loss of use arising from:

- Damage caused by abuse, misuse, neglect, failure to provide maintenance (such as draining your water heater, touching up caulk or grout, or infestation), or failure to maintain adequate ventilation and humidity levels in the Tiny Home RV/Travel Trailer;
- Normal wear and tear, deterioration of construction materials within expected levels, including warpage or shrinkage within industry standards, rain or other water intrusion, or changes due to weather conditions, natural disasters, or soil movement or settling;
- Damage caused by third parties or "Acts of God", such as earthquakes, floods, heavy winds, animals, saltwater, vandals, or lightning strikes.
- Damage caused by you or people you hired or allowed to work on the Tiny Home RV/Travel Trailer;
- Your housing costs and living expenses or other loss of use damages if you have to move out while covered repairs are being made to your Tiny Home RV/Travel Trailer;
- Temperatures inside the Tiny Home RV/Travel Trailer being allowed to exceed 85 degrees or go below 55 degrees Fahrenheit;
- Home appliances or equipment that are part of your Tiny Home RV/Travel Trailer, such as your refrigerator, stove, dishwasher, heaters, which come with warranties provided by their manufacturers. Such manufacturer-provided warranties represent your sole remedy with respect to defects related to those appliances or equipment;

- Pipes and water tanks not being emptied when the Tiny Home RV/Travel Trailer is vacated for any period of time;
- Not installing a “skirt” around the base of your Tiny Home RV/Travel Trailer when sitting longer than 10 calendar days;
- Damage cause due to contact with another object either in motion or stationery while transporting or re-locating the Tiny Home RV/Travel Trailer. Damage caused by your or other parties' failure to properly secure items within the Tiny Home RV/Travel Trailer or the tow vehicle. Damage caused by the tow vehicle operator's negligence or failure to obey posted road signs. Damage caused by failure to adhere to manufacturer and industry recommendations regarding travel. Any damage to the tiny home while traveling on a non-designated roadway. This does not include the initial delivery of your Tiny Home RV/Travel Trailer as outlined in the Construction and Sale Agreement;
- Damage caused by failure to maintain wheels, tires, axles, or bearing. More frequent maintenance is required more often in locations closer to saltwater;
- Any tampering, installing or uninstalling or modifying of any materials, products, appliances within or on the Tiny Home RV/Travel Trailer;
- Renting, leasing, or using the Tiny Home RV/Travel Trailer as a hotel or AirBNB.

#### **LIMITATION OF LIABILITY:**

Aside from the Limited Liability Warranty stated above, Manufacturer disclaims and Client releases and waives all warranties and covenants, express or implied (including any implied warranty of merchantability or fitness for a particular purpose), related to the Tiny Home RV/Travel Trailer and its appliances, contents, consumer products (collectively the “Property”) as defined in the Magnuson-Moss Warrant Act, or consumer goods as defined in the Uniform Commercial Code. Further, Client releases and waives any and all claims, known and unknown, now existing or later arising, against Manufacturer and its members, managers and employees, arising out of or relating to the tiny home and/or the Property. This release and waiver are absolute and unconditional. It applies to claims under any and all legal theories.

#### **HOW TO GET WARRANTY SERVICE:**

If your Tiny Home RV/Travel Trailer needs warranty service, please contact us through our website at <https://www.tinyheirloom.com/warranty-claims/> to make arrangements for warranty work or inspection. Except as provided below, we will perform all warranty work at our facility. You are responsible for the cost of transporting your Tiny Home RV/Travel Trailer to and from our facility for any warranty work. However, we reserve the right to hire a contractor near you, at our expense, to perform warranty work when, in our sole discretion, such work can more efficiently and effectively be performed in such a manner.

# PARKING | INSURANCE | FINANCE

## PARKING

Finding a space to park your Tiny Home RV/Travel Trailer, either long term or temporarily while traveling, isn't always easy. Most State and Local rules have recently changed in favor of allowing Tiny Home RV/Travel Trailers to be parked on one's property as long as they meet all required codes. However, we're partnered with our friends Try it Tiny, who have connections with landowners all over the country and in-depth knowledge about all the relevant rules and laws. They can help you facilitate where to park your next Tiny Home RV/Travel Trailer. Contact: [info@tryittiny.com](mailto:info@tryittiny.com)



## INSURANCE

Most places won't insure a Tiny Home RV/Travel Trailer or it will be a hassle to get them to – they don't know how to classify it, what its value is, and so on. That's not the case with Tiny Home RV/Travel Trailer Insurance from Strategic Insurance Agency. They are Tiny Home RV/Travel Trailer insurance specialists. Fill out the form on their site, or you can contact Ashley Dodge directly at 719-602-1200 and [ashley@mystrategicinsurance.com](mailto:ashley@mystrategicinsurance.com)



## FINANCING

We are proud to offer in-house financing options through our great credit unions and community banking partners. These are 10 to 20-year RV loans with rates as low as 4.49% APR with as little as 10% to 20% down-payment O.A.C for extremely well-qualified buyers.

We can offer these loans because we are RVIA certified and NADA listed and sell all our homes through a licensed RV dealership.

Please contact us at [sales@tinyheirloom.com](mailto:sales@tinyheirloom.com) for more information and let us help you make your Tiny Home RV/Travel Trailer dreams come true.

## **Certifications and Accreditations**

We are proud to announce that we are accredited through NHTSA (National Highway Transportation Safety Agency, RVIA (Recreational Vehicle Industry Association) and NADA (National Automobile Dealers Association). This is what allows Tiny Heirloom to manufacture and provide you the safest and best built Tiny Home RV/Travel Trailer in America while offering you the ability to be able to finance any of our models with most institutions and legally being able to license and register your Tiny Home RV/Travel Trailer in all 50 United States.



[www.tinyheirloom.com](http://www.tinyheirloom.com)