PROBLEM? RELAX. YOU'VE GOT THIS!

The Heat Pump Is New, and I Still Don't Know What to Set



How to Gather Installation Documentation, Understand Basic Settings and Energy Consumption, and Work with Your Installer to Optimize Performance Without Experimenting with the Entire Heating System Yourself

Max Paradox

The Heat Pump Is New, and I Still Don't Know What to Set

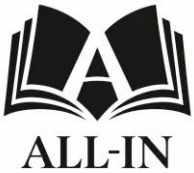
How to Gather Installation Documentation, Understand Basic Settings and Energy Consumption, and Work with Your Installer to Optimize Performance Without Experimenting with the Entire Heating System Yourself

Max Paradox

PROBLEM? RELAX. YOU'VE GOT THIS!

ISBN: 9788384838761

ALL-IN Rafał Płonkowski



CONTENTS

INTRO 5

Chapter 1 - You Bought a Heat Pump, Not Just a Box: Understanding What Actually Heats Your Home 10

Chapter 2 - The Controller Knows the Numbers. Do You Know What They Mean? 19

Chapter 3 - It Was Supposed to Be Cheap, Warm, and Effortless. So Why Are You Worried? 28

Chapter 4 - Three Secret Settings and a Smaller Bill: Why Internet Shortcuts Can Get Expensive 36

Chapter 5 - The Missing Paperwork Mystery: How to Recover the History of Your Heating System 45

Chapter 6 - The Thermostat Wars: When Everyone in the House Wants a Different Temperature 53

Chapter 7 - Where Did the Hot Water Go? Understanding the Mystery of the Suddenly Cold Shower 62

Chapter 8 - The Heat Pump Has Neighbours: Weather, Maintenance, and the Trouble Outside the Controller 71

Chapter 9 - What Is Your Heat Pump Actually Consuming? Stop Guessing and Start Understanding the Numbers 80

Chapter 10 - Your Installer Cannot Read Your Mind: How to Ask for Optimisation That Actually Means Something 88

Chapter 11 - The Settings Audit: Find Out What Was Configured Before Changing Anything 97

Chapter 12 - One Adjustment, One Clear Answer: How to Tell Whether Optimisation Worked 106

Chapter 13 - Solar Panels, Cheap Electricity, and a Smart Home: When Automation Starts Working Against You 115

Chapter 14 - The First Year with a Heat Pump: Four Seasons, Four Very Different Questions 124

Chapter 15 - The Heat Pump Is Showing an Alarm, and Nobody Is Answering: How Not to Make Things Worse 134

Chapter 16 - "That's Just How the System Works": Recognising Real Limits Before Paying for a Rebuild 143

Chapter 17 - No Data, No Time, and No Money for Another Fix: Making Sensible Decisions When Conditions Are Far from Ideal 152

Chapter 18 - The Settings Are Finally Right: How to Keep the Results Without Starting the Chaos Again 161

Chapter 19 - Someone Changed Something, and Now Everything Feels Different: Getting Back to Normal Without Starting Over 170

Chapter 20 - The Heat Pump Should Heat Your Home, Not Your Head: Becoming a Confident Owner Without Becoming a Technician 179

INTRO

It is Sunday evening, and you are standing in front of your brand-new heat pump wearing the expression of someone who has just discovered an unexpected responsibility. The house is warm. The hot water works. Nothing appears to be broken. Yet the display has announced something called "supplementary heating," and you have absolutely no idea whether that means the system is operating normally or preparing to send your electricity bill into orbit. You press a button, discover another screen containing six temperatures, and immediately regret becoming curious. Somewhere in the house, your family is enjoying a perfectly ordinary evening. You, meanwhile, are having a philosophical disagreement with a machine that cost more than your first car.

This was not how you imagined owning a heat pump. You pictured modern technology quietly handling the heating while you got on with your life. The installation company had arrived with equipment, tools, and reassuring confidence. People connected pipes, checked instruments, discussed technical details, and eventually declared the system ready. Someone demonstrated the controller, explained a few basic functions, and suggested that you probably would not need to change much. At the time, that sounded wonderful. Unfortunately, "you probably won't need to change much" is not quite the same as "you will understand what to do when something seems wrong." That difference becomes painfully obvious the first time the house feels colder than expected or the electricity consumption looks unfamiliar.

A heat pump is not simply an expensive replacement for an old heating appliance. It works as part of a system involving the building itself, heat distribution, controls, hot water preparation, and sometimes additional heating equipment. The pump may be performing exactly as designed while another part of the

installation limits comfort. Alternatively, a perfectly ordinary operating condition may look suspicious because nobody explained what you should expect. This makes troubleshooting less straightforward than finding one mysterious setting and changing it until the numbers look better. The controller can display a great deal of information, but it does not necessarily tell you which information matters. It certainly does not know how thoroughly the installation handover failed to prepare you for your new hobby.

Your first instinct may be to search online. Within minutes, you discover people passionately debating heating curves, flow temperatures, compressor cycling, hot water schedules, and efficiency figures. Some insist that a particular adjustment transformed their system. Others claim that making the same adjustment would be ridiculous. Both sides sound remarkably confident, considering that neither has visited your house. The difficulty is that their homes may have different insulation, heat emitters, controls, climates, and hot water requirements. Even identical heat pump models can operate under very different conditions. Advice that makes sense for one installation may be unsuitable for another. The internet can help you understand terminology, but it cannot turn a stranger's settings into a personalised engineering assessment.

Then there are the numbers. One screen reports electrical consumption, another shows temperatures, and a third promises an efficiency figure that looks impressive until you try to understand how it was calculated. Your electricity supplier presents another set of figures, while the household meter includes appliances unrelated to heating. If you have solar panels, energy imported from the grid may differ from the electricity actually consumed in the house. None of these measurements is inherently useless. The problem arises when you compare quantities that describe different things or draw conclusions from periods with different weather and household demands. A lower bill does not

automatically prove better heat pump performance, just as a higher daily consumption figure does not automatically establish a fault.

This book will help you separate useful information from distracting detail. You will learn how to recognise the main components of your installation, understand the purpose of common operating values, and interpret consumption without treating every unusual figure as an emergency. More importantly, you will learn the difference between something you can reasonably observe and something that requires professional assessment. These distinctions matter because uncertainty often encourages unnecessary action. When people cannot explain a setting, they sometimes feel compelled to change it simply to regain a sense of control. Unfortunately, a heating system does not reward confidence alone. An enthusiastic adjustment can still be an entirely inappropriate adjustment.

Another surprisingly important subject is paperwork. Somewhere there should be information identifying the equipment, explaining the installation arrangement, recording commissioning details, and describing warranty and maintenance requirements. The precise documents available will depend on the project and applicable requirements. Perhaps you already have them neatly organised. Perhaps they are scattered across emails, photographs, and a folder optimistically labelled "House Stuff." Either way, having reliable information about what was installed and how it was configured makes later decisions considerably easier. A manufacturer's manual explains the possibilities of a product, but it may not reveal which options your installer selected for your particular system. That missing distinction can become expensive when someone begins changing settings without understanding the original design.

Consider a bedroom that never seems to reach the desired temperature. Increasing the heat pump's overall heating output might seem like the obvious answer, but the actual issue could

involve the local controls, heat distribution, the room's heat loss, or another part of the installation. Without investigating the cause, you could make the rest of the house uncomfortably warm while leaving the bedroom problem unresolved. The same principle applies to hot water. If the shower runs cool sooner than expected, the explanation might involve storage capacity, heating schedules, mixing arrangements, or patterns of household use. One uncomfortable experience does not identify the faulty component. A sensible response begins by describing exactly what happened, rather than immediately selecting the largest available number on the controller.

You will also learn how to work more effectively with the people responsible for the installation. A useful conversation with an installer is not a contest in which you must demonstrate superior technical knowledge. It involves explaining the problem, supplying relevant observations, asking what has been checked, and understanding the purpose of any proposed change. If an adjustment is recommended, you should know what improvement it is intended to produce and how that improvement can be assessed. Sometimes the answer will be a technical correction. Sometimes it will be a repair or further investigation. Occasionally, the most appropriate recommendation will be to leave a correctly operating system alone, which is admittedly disappointing if you were hoping for a dramatic revelation involving a secret menu.

There are also boundaries that matter. Everyday controls intended for homeowners are different from service parameters, electrical components, refrigerant circuits, and safety protections. An available menu option is not necessarily permission to experiment. Some changes can affect equipment reliability, comfort, hygiene, or safety in ways that are not immediately obvious. Warning messages, suspected leaks, electrical faults, and other potentially dangerous conditions require the appropriate manufacturer guidance and qualified assistance. This book cannot

replace the instructions for your particular equipment, professional commissioning, or technical diagnosis. Its purpose is to help you recognise when you have enough information to act within normal user controls and when the responsible decision is to involve someone qualified.

None of this requires you to become obsessed with heating. You may have limited time, incomplete documentation, an unhelpful application, or more pressing expenses than another optional monitoring device. That is ordinary life, not evidence that you are incapable of managing your home. You do not need perfect measurements before asking an intelligent question. You do not need to watch compressor statistics every evening to be a responsible owner. You need a practical understanding of your installation, a manageable way to recognise meaningful problems, and a clear route to professional help when necessary. The heating system should support your household rather than compete with your household for attention.

The goal is simple: to move from guessing at settings to understanding your options. By the end, you should feel more comfortable reading basic information, organising essential records, discussing possible improvements, and recognising the limits of your own role. You will not emerge as a certified heat pump engineer, nor should you need to. You will be a homeowner who can distinguish a reasonable question from a risky experiment and a genuine improvement from a particularly attractive graph. Your heat pump has a job to do. So do you, but yours should not involve spending every weekend negotiating with the thermostat. Ideally, the most interesting thing about your heating system will eventually be how little attention it needs.

Chapter 1 - You Bought a Heat Pump, Not Just a Box: Understanding What Actually Heats Your Home

The installation team has left, the paperwork is somewhere safe, and your new heating system is officially operational. You decide to show it to a visiting relative, partly because you're proud of the investment and partly because the equipment looks expensive enough to deserve an audience. You open the utility room door, gesture confidently towards the machinery, and announce, "That's the heat pump." Your relative points at a tall insulated cylinder beside it and asks what that does. You explain that it stores water. Then they point at another component, followed by a collection of pipes and a small device displaying numbers. Your confidence begins to deteriorate. Eventually, you explain that everything is connected and works together, which is technically true but also a description of most functioning machinery on the planet.

The difficulty is that people usually purchase a heating solution as a single product. They compare manufacturers, capacities, energy ratings, warranties, and installation quotations. The heat pump receives nearly all the attention because it is the expensive, recognisable component. Yet the comfort you experience inside your home depends on the combined operation of several different systems. The pump must obtain energy from its surroundings and transfer heat into the building, but that heat still needs to reach the appropriate rooms. Hot water must be prepared, controls must coordinate demand, and the installation must provide suitable conditions for the equipment to operate. A problem anywhere along this chain may affect the result, even when the heat pump itself is working correctly.

Think of your installation as a delivery service. The heat pump produces the useful heat, the distribution system transports it, the emitters release it into the rooms, and the controls decide when and how much is needed. A delivery company could have an excellent warehouse and still fail to deliver your parcel because the roads are blocked or the address is incorrect. Similarly, increasing the output of the heat pump will not necessarily correct a problem with a particular heating circuit. Before changing anything, it helps enormously to understand the journey that heat takes through your home. You do not need to become a heating engineer. You simply need to know which parts perform which functions and where their responsibilities begin and end.

The heat source is only the beginning

A heat pump transfers energy from a source at a lower temperature to a heating system at a higher temperature, using electrical energy to make that process possible. In an air-source installation, energy is obtained from the outside air. Ground-source systems use a different arrangement to obtain energy from the ground. The exact equipment and operating characteristics vary, but the underlying idea is similar. The pump transfers heat rather than generating all of it directly from electricity in the manner of a conventional electric resistance heater. That distinction helps explain why heat pumps can provide more thermal energy than the electrical energy they consume, under appropriate conditions. It does not mean their performance is constant regardless of outdoor temperature, heating requirements, or installation design.

In an air-to-water system, you might have an outdoor unit and an indoor unit, although different designs distribute components in different ways. Some arrangements use a refrigerant connection between units, while others use water-based connections outside, with corresponding requirements for frost protection and installation safety. Certain models package much of the equipment together. These differences are not merely cosmetic. They affect

which components are located where, who may service them, and what precautions apply. You should not open covers to investigate the internal arrangement or attempt to identify refrigerant connections yourself. The manufacturer's model information and installation records are much better starting points than removing panels to satisfy your curiosity.

Once heat has entered the water-based heating system, it needs to be distributed. This is where circulating pumps, pipework, valves, manifolds, and possibly additional control components become relevant. Their particular arrangement depends on the installation. A single heating circuit serving underfloor heating throughout a relatively simple house may be organised differently from a property combining radiators, underfloor heating, and separate temperature zones. Some systems contain mixing arrangements or multiple circulation circuits. Others are comparatively straightforward. It is a mistake to assume that a more complicated installation must be superior, or that fewer components automatically mean something important has been omitted. The right question is whether the arrangement suits the design and operates as intended.

The devices that actually release heat into your rooms matter just as much as the machine supplying it. Underfloor heating distributes energy through large floor areas and may be designed to work with relatively low water temperatures. Radiators vary in their capacity and in the water temperatures required to deliver a particular amount of heat. Other types of heat emitters have their own characteristics. This helps explain why copying the settings from a house with different emitters can produce disappointing results. Two owners may use exactly the same heat pump model but require different heating-water temperatures to maintain comfortable rooms. Their buildings are different, their distribution systems are different, and the heat pump has no obligation to make those differences disappear.

Consider an imaginary renovation in which a homeowner replaces several radiators but leaves the main heat pump unchanged. The new radiators may have different output characteristics from the original ones. If the room subsequently struggles to maintain its temperature, the cause cannot be identified merely by looking at the heat pump display. The heating-water temperature, emitter capacity, flow, room heat loss, and control arrangement may all be relevant. An installer or appropriately qualified designer should assess the relationship between them. Turning up the main temperature because one room feels uncomfortable could increase energy consumption while leaving the underlying mismatch unresolved. It is an impressively expensive way of avoiding the actual question.

The cylinders that all look suspiciously important

Storage tanks deserve special attention because they can look surprisingly similar while performing different jobs. A domestic hot water cylinder stores water intended for household use, such as washing and bathing. A buffer tank, where one is installed, serves a different purpose within the space-heating system. Depending on its design and arrangement, it may contribute to hydraulic separation, provide water volume, or support particular operating requirements. Not every heat pump installation needs the same tank configuration, and the presence or absence of a buffer cannot be judged sensibly from photographs alone. Anyone who claims that all buffers are essential or all buffers are a terrible idea has managed to compress a complex design question into an extremely convenient slogan.

The distinction becomes important when you are trying to understand what the controller is doing. A temperature shown for domestic hot water may relate to stored water that will eventually be used at a tap. A temperature shown for the heating circuit concerns a different part of the installation. These quantities should not be treated as interchangeable. Likewise, some systems direct

the heat pump's output towards domestic hot water preparation for a period, rather than supplying space heating in the usual way. This can be normal behaviour under the installed control strategy. Without knowing which tank is which and how the system prioritises its duties, you might interpret an ordinary change of operating mode as a mysterious disappearance of heating capacity.

Then there are the components most homeowners notice only when something goes wrong. Expansion vessels, pressure indicators, filters, safety valves, and other protective or hydraulic devices may be included according to the system design. Some are readily visible; others are incorporated into equipment or located away from the main unit. Their appearance does not tell you whether they are operating properly. Nor does seeing a valve mean it is appropriate to operate it. In particular, pressure-related interventions, electrical work, and servicing refrigerant-containing components may require specialist knowledge and precautions. Your goal is to identify what has been installed and obtain reliable explanations, not to demonstrate that every component can be manipulated by a sufficiently determined homeowner.

Additional electrical heating equipment also deserves an explanation during handover. Some heat pumps incorporate or cooperate with electric resistance heaters or another supplementary heat source. Their role depends on the design, operating conditions, and manufacturer configuration. They might support heating under specified circumstances or participate in certain protective or domestic hot water functions. Their existence is not automatically evidence of poor design, nor should they be casually disabled to reduce electricity consumption. Ask the installer what supplementary heating is provided, under what circumstances it is expected to operate, and how unusual operation should be investigated. The answer may be less exciting than the internet's favourite recommendation to switch everything off, but it is substantially more useful.

Who is actually in charge?

Modern installations may have several devices capable of influencing heating. There could be a central heat pump controller, a room sensor, individual thermostats, zone-control equipment, and a separate smart-home system. The important issue is how these components interact. A room thermostat may request heating, influence a calculated target, or operate a particular zone. In some configurations, the main controller principally follows outdoor conditions, with room feedback serving a limited or supplementary purpose. The behaviour depends on the actual design. If you do not know which device has authority over which function, pressing buttons on several different controllers can create confusion without producing a meaningful improvement.

Imagine a household where the living room thermostat has satisfied its demand, but a bedroom still feels cool. Depending on the system, the living room control might influence the heating available elsewhere, or the bedroom might have independent control. Neither conclusion can be assumed without knowing how the circuits are arranged. What appears to be an underperforming heat pump might involve the interaction of several controllers. The right response is to have that interaction explained, preferably with reference to a diagram. It is much easier to discuss a specific control arrangement than to argue with three displays that appear to be issuing contradictory orders. Electronics are excellent at following instructions and considerably less talented at resolving family disagreements.

This is also why a manufacturer's general manual is only part of the story. It describes what equipment can do, but the installation may use only selected functions. Options displayed in the documentation might not be enabled, connected, or appropriate for your system. Some settings are intended for homeowners, while others are reserved for commissioning or qualified service personnel. The installer should be able to identify the relevant user

functions and explain their limits. That explanation is far more valuable than receiving a list of every possible menu item. You need to understand your installed system, not prepare for an examination on everything the manufacturer has ever designed.

Make a map before you make a decision

A useful first exercise is to walk through the accessible parts of your installation without operating or dismantling anything. During daylight, take a photograph showing the overall arrangement. Then identify, using available labels and documents, the main heat pump components, domestic hot water cylinder, heating distribution equipment, and controllers. If you cannot identify something, leave it unidentified rather than inventing a function. You might create a simple sketch showing what you know and mark the uncertain components for discussion with your installer. This is not an engineering drawing and must not be used to determine how to modify the system. It is a tool for asking clearer questions.

Equipment identification is particularly important. The sales name on your quotation may cover several versions of a product. Exact model identifiers and serial numbers allow a manufacturer or service company to locate the appropriate documentation and distinguish equipment variants. Keep those details with the installation records, along with any relevant controller identification. You may also need information about the domestic hot water cylinder and additional control equipment. Obtain inaccessible details from the installer rather than removing covers or entering restricted areas. A clear photograph of an accessible nameplate is useful. A homeowner attempting to reach an internal label beside live electrical components is not an acceptable substitute for missing paperwork.

Next, find out whether you have documentation showing the installation as actually built. Original drawings can be useful, but alterations may have been made during construction. An as-built schematic, if available, should represent the installed arrangement

rather than merely the initial proposal. Commissioning records may also contain relevant checks and configuration details. The exact documentation requirements depend on the project, contracts, and applicable rules. If important information is missing, request what is available and ask how unresolved details can be verified. Avoid assuming that the absence of a particular document proves a technical fault. Equally, do not assume that a confident verbal assurance answers every question about the completed system.

One practical challenge is identifying who is responsible for what. The company supplying the heat pump may differ from the contractor installing the distribution pipework. Electrical connections might have been completed by another professional, while controls were configured by a separate specialist. This arrangement can work perfectly well, but it becomes frustrating when nobody knows who should investigate a problem affecting more than one part. Before you need urgent assistance, establish which business handles equipment faults, heating distribution, controls, warranty matters, and routine maintenance. You do not need a complicated organisation chart. A small collection of accurate contact details and clearly defined responsibilities can prevent the familiar experience of being transferred between contractors until your telephone begins to feel like part of the heating circuit.

The final test of your understanding is whether you can describe the installation in ordinary language. You should be able to explain broadly where heat comes from, how it reaches the rooms, how domestic hot water is prepared, and which controls influence everyday comfort. You may still need help understanding individual components, and that is perfectly reasonable. What matters is knowing where your knowledge ends and who can fill the gap. Once you understand the system's basic structure, a cold room no longer automatically means "turn up the heat pump," and

a hot water problem no longer automatically means "change the main heating setting."

Your home is not heated by a brand name, a glowing display, or the particularly reassuring sound of an installer saying everything is finished. It is heated by a collection of components designed to work together. Understanding that collection gives you something much more valuable than the ability to recognise an expensive machine. It gives you a foundation for sensible observations, informed questions, and decisions that do not begin with randomly turning whichever control looks most promising.

Chapter 2 - The Controller Knows the Numbers. Do You Know What They Mean?

A heating controller is a remarkable piece of equipment. It can display temperatures, operating modes, schedules, electricity consumption, and occasionally enough abbreviations to make you suspect that an entire committee was paid by the acronym. Yet it may fail to answer the one question you actually have: "Is my heating working properly?" You look at a screen showing 37°C, another showing 29°C, and a third displaying a target of 42°C. The room feels comfortable at 21°C. One figure is rising, another is falling, and the controller seems entirely satisfied with itself. The natural temptation is to treat the largest number as suspicious and the smallest as an opportunity for improvement. Unfortunately, that is not how the system works.

The first skill in understanding a heat pump controller is learning to distinguish three types of information: measurements, targets, and operating states. A measurement describes what a sensor or monitoring arrangement reports at a particular moment. A target represents a value the controller is attempting to achieve or use in its calculations. An operating state tells you what function the equipment is currently performing. These categories can overlap on a display, but they mean different things. A target temperature need not equal the measured temperature every second, and an operating state does not necessarily describe a fault. If you start by asking which category a number belongs to, an intimidating collection of data becomes considerably easier to interpret.

For example, a controller might show a target heating-water temperature of 35°C and an actual measurement of 31°C. This difference does not, by itself, establish a problem. The system may have recently started, changed its output, or entered a particular