

# Heat Wrap

## user manual

Samitech Heat Wrap is a physical heat solution against xylophages.

Modular set consisting of 6 heating panels adaptable to any surface.

Heat Wrap uses Samitech's exclusive infrared heating technology.



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## Introduction

Thank you for purchasing SAMITECH's Heat Wrap, the physical solution against xylophages in all stages for any kind of wood.

SAMITECH has revolutionised the pest control business with their infrared technology that penetrate treated objects killing any insect by dehydration. Heat Wrap is effective against any wood insect like termites, wood worms, bed bugs, mites, fungi, moths, worms, etc.

Please, read the instructions carefully before using this product.

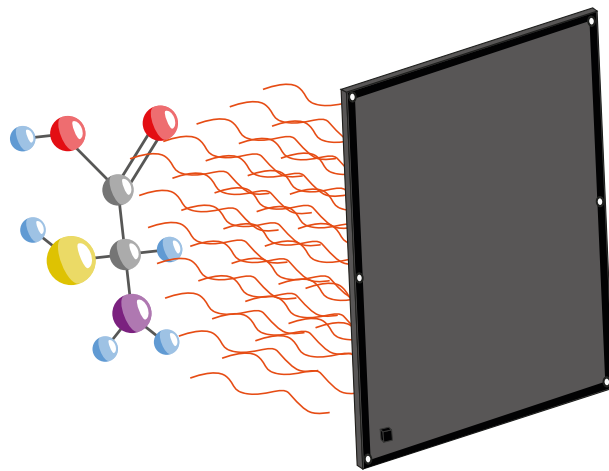
## Product description

### Infrared heating technology

Samitech's Heat Wrap uses the same heating principle as sun rays: infrared waves. This energy is 100% safe and more efficient than convection heat because you avoid the need to heat up all air surrounding treated objects.

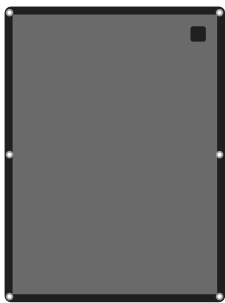
Samitech's heating panels radiate infrared waves that penetrate deeply into treated objects attacking the protein molecules of xylophages or insects inside the wood killing them by dehydration.

Infrared treatments are 100% physical, avoiding any use of chemicals and guarantee the conservation of treated objects without causing them any damage.

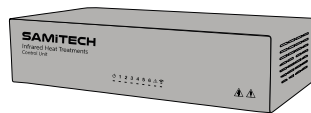


## Components

Samitech's Heat Wrap is a set of six flexible heating panels that allow the PCO the possibility to adapt them to any wood surface. Heating panels are controlled and monitored with an electronic Control Unit. A free downloadable app compatible with both iOS and Android will act as the user's interface to setup and monitor each treatment.



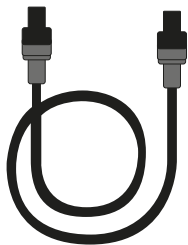
Heating panel (6 units)



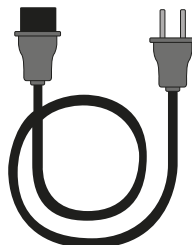
Control unit



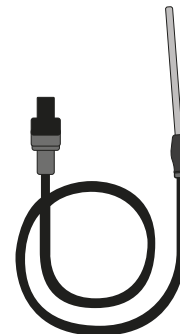
Quick start guide



Connection cable (6 units)



Power cord



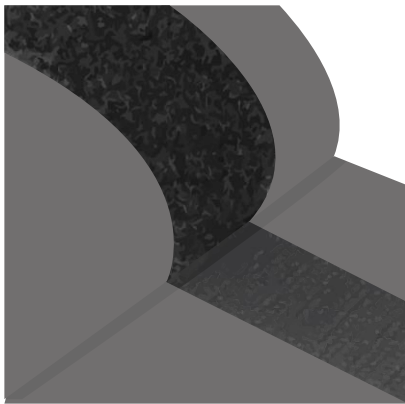
Temperature probe (2 units)

## Product setup

This section contains all details required to set up the SAMITECH Heat Wrap before each treatment.

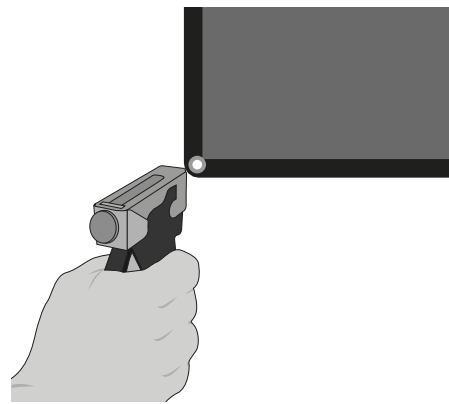
### Assembly

Heating panels have two fixing systems which make them versatile to adapt to any shape and surface of treated objects.



#### Velcro

Each Heating Panel has a perimetric Velcro strap on both sides. These straps allow to wrap objects like pillars or beams and are also suitable to form mosaics with other panels to cover bigger surfaces in floor, wall or ceiling treatments.



#### Eyelets

Each Heating Panel has 6 eyelets all around which can be used with staples, nails, screws, string or plastic flanges to fix panels either to one another or to treated objects.

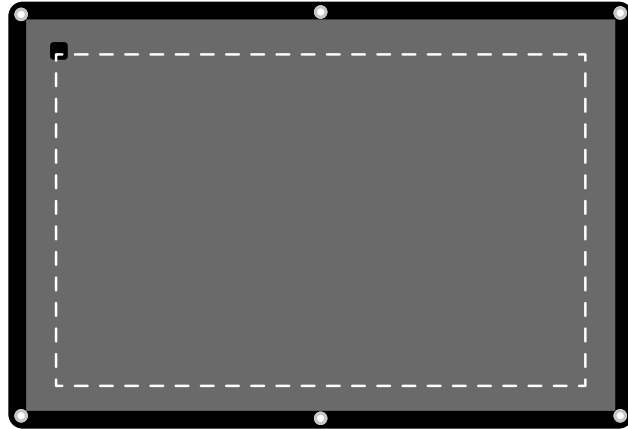
The shape or size of the object you want to treat with Heat Wrap Smart is immaterial. Use one or more panels to adapt the set to any need.

### Maximum efficiency area and overlapping

Due to electrical safety and heating panels construction procedure, there is a perimeter area of about 6cm in which the panel does not directly radiate infrared heat. In general, to avoid a discontinuity in the total treatment surface, you can avoid this gap by overlapping the panels up to 6cm.

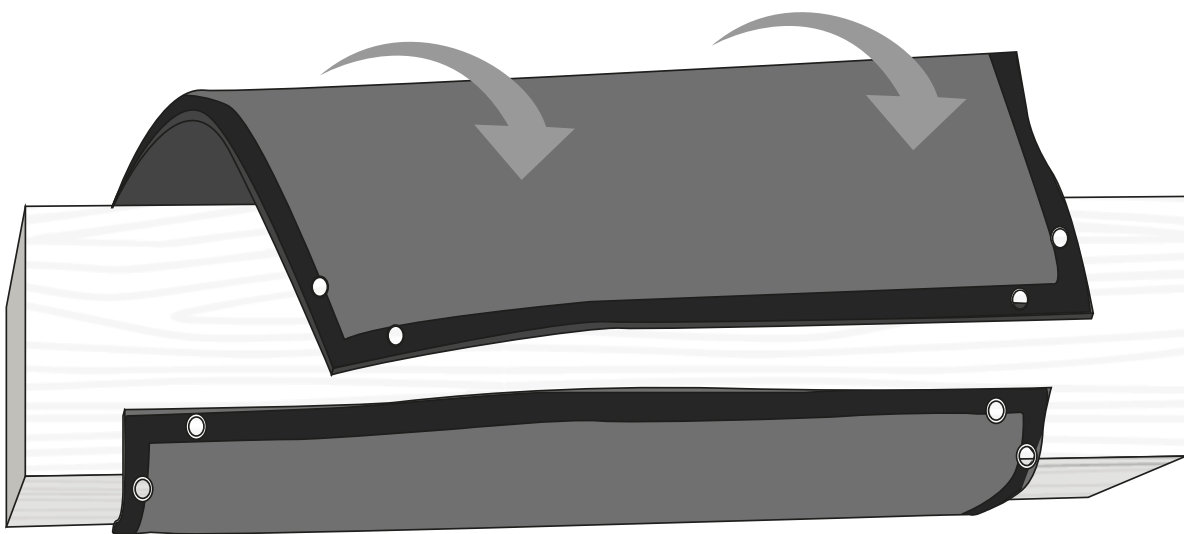
Remember you should never overlap the heating panels beyond this safety perimeter.

The picture shows the area of maximum efficiency delimited by a dashed white line.



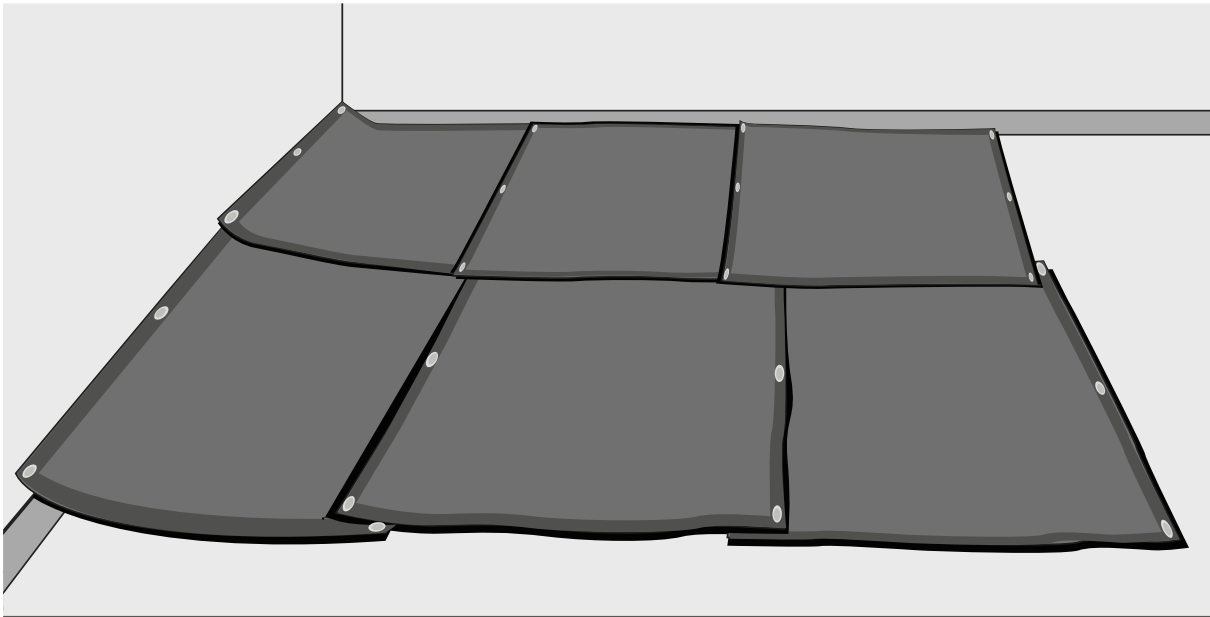
### Shape it as needed

Wrap a beam or a column with a heating panel. Avoid by all means overlapping heating surfaces as this could cause overheating and damage to panels or treated objects.

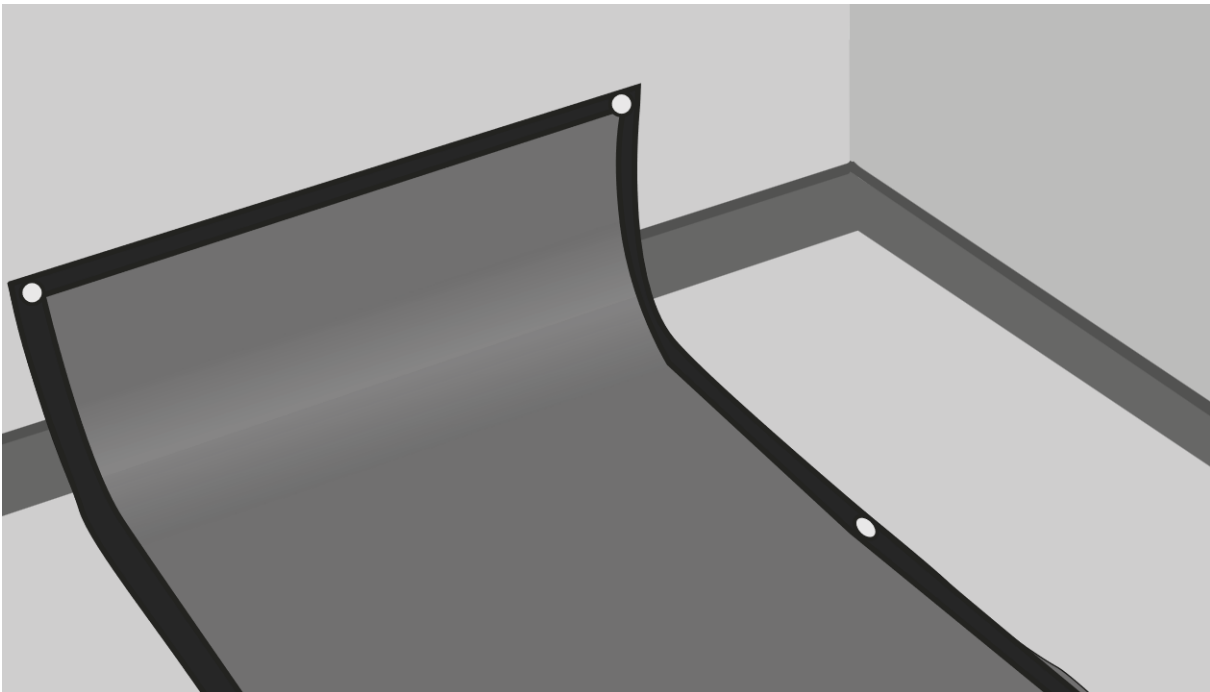


To treat big surfaces (floors, walls, ceilings...), the best way is to create a mosaic joining several panels by means of the Velcro straps.

If surface to be treated is larger than surface covered with all 6 panels, you can do the treatment in stages, but you should move the panels after each treatment if possible, always in the same direction.

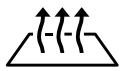
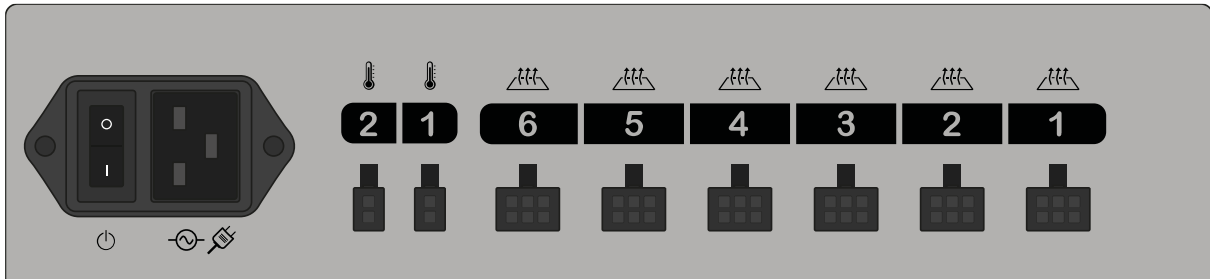


Baseboards can also be treated if covered by heating panels





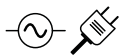
## Connections



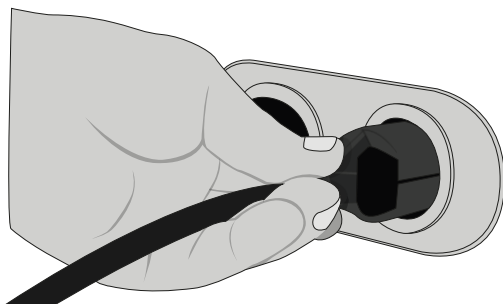
Connect any heating panel used in the treatment to the Control Unit using the cable provided. Each socket in the Control Unit is numbered and will appear in the app. You can plug each panel to any socket in the Control Unit.



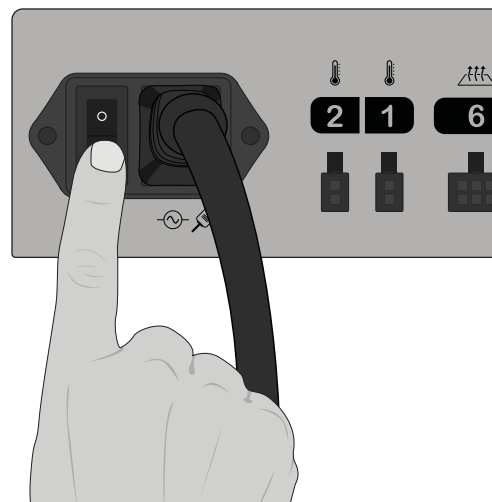
Optionally, connect one or both temperature probes to indicated sockets in the Control Unit.



Connect the power cable to the Control Unit.



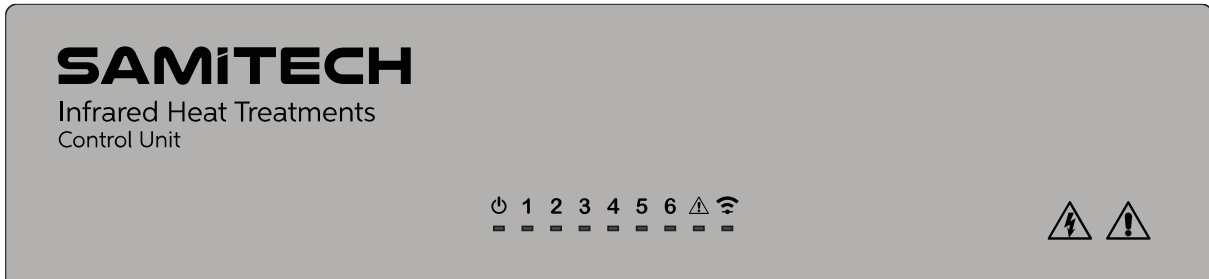
Finally, connect the power cable to the power outlet.



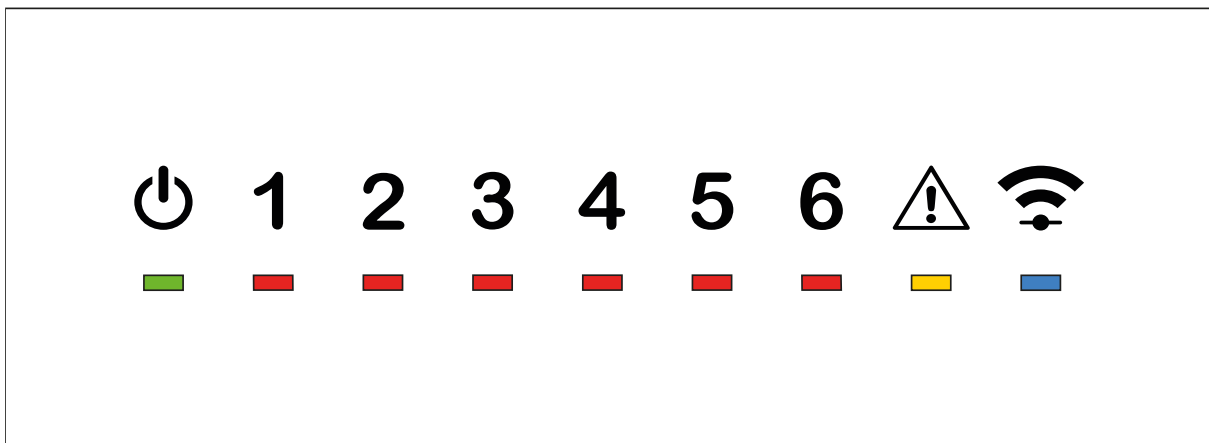
Switch on the Control unit by placing the power switch to position I.

Always check electrical and equipment safety conditions.

## Status indicators



Control Units have colour LEDs to show device status.



This indicator will remain green while the Control Unit is switched on.

123456

These indicators show operation status of each corresponding heating panel. Red light indicates that panel is active at that time.



This blue indicator shows active Bluetooth status.



This amber indicator shows that there is a problem in any heating panel. Number of flashes indicate panel number with an issue. In case of a problem is any panel, switch off the Control Unit and check that panel is properly connected. If problem persists, contact your Technical Service

Number of flashes	1	2	3	4	5	6
Heating panel number	1	2	3	4	5	6

In case of error, switch off the Control Unit, check the cable connections for that panel. If problem persists, contact Technical Service to repair your equipment.

## Necessary checks before each treatment

Thoroughly inspect and confirm that all objects are safe and suitable to be treated.

Review the objects and identify any existing damage and duly inform the client. It is recommended to take photographs as proof of pre-existing damage before starting any treatment.

Inform the client of any pre-existing anomaly or damage to the objects and that treatment cannot be stopped once initiated.

### These objects should not be treated:

- Animals, plants or seeds.
- Food and beverages
- Medicines
- Electronic, medical or lab appliances
- Cosmetics and toiletries
- Pressurised containers (aerosols, sprays, carbonic cartridges, fire extinguishers, etc.). Waxy objects (candles, paintings, etc.).
- Firearms and ammunitions.
- Musical instruments.
- Valuable and irreplaceable objects (photos, jewels, etc.)
- Documents, money
- Magnetic, optical, solid and mechanical media and storage devices (hard drives, SSD, USB pen drives, video tapes, cassettes, etc.).
- Flammable or combustible materials (solvents, oils, glues, paints, lacquers, varnishes, etc.).
- Printer toner or inks
- Photographic materials (films, negatives, paper, developers, etc.).
- Corrosive or hazardous chemicals (bleach, cleaning chemicals, etc.).
- Any type of objects that can be damaged or deteriorated by heat.

This list of objects is not exhaustive. All objects to be treated should be thoroughly inspected to confirm that they are suitable.

Any other sensitive object that can be identified by the operator or the client during the inspection must be removed. In case of doubt with any object, do not treat it.

Objects removed should be visually inspected for evidence of infestation. If they are infested, and those objects are not suitable for heat treatment, a convenient alternative method should be used to treat them before returning them to their place.

## References for treatment durations

Each heat treatment in wood is different: duration times will depend on the object treated, the wood (thickness, density and humidity) and the type of plague to fight.

Insect eggs are usually found deep inside the wood, when they become larvae they tend to seek the outer layers of the wood, feeding on the first layers of the inner cortex which is typically softer. In order to exterminate the larvae the treatment duration is typically shorter than when fighting eggs.

Following there is a table showing typical treatment times depending on type of wood and taking maximum temperature of 100°C (212°F) as a reference

### Beams and columns

Thickness	Low density wood		High density wood	
	Low humidity (2-6%)	High humidity (8-15%)	Low humidity (2-6%)	High humidity (8-15%)
5cm / 1.9in	60 min	60 min	60 min	60 min
10cm / 3.9in	80 min	100 min	100 min	120 min
20cm / 7.8in	160 min	180 min	180 min	200 min
30cm / 11.8in	260 min	280 min	290 min	300 min
40cm / 15.7in	300 min	330 min	330 min	350 min

### Wooden floors, panelled walls, etc.

Thickness	Low density wood	High density wood
Up to 10cm / 3.9in	120 min	180 min
More than 10cm / 3.9in	160 min	200 min

## Precautions during treatments

- Do not manipulate nor change position of heating panels or treated object during treatments unless strictly necessary.



- Do not interrupt power supply during treatments. In case of power failure, treatment should be restarted from scratch.
- If you need to abort treatment press the red button STOP. Treatment will be aborted immediately.
- Once treatment is finished wait at least 10 minutes before removing panels in order for the heat to cool down.
- Generated heat can cause condensation. It is to be expected to find treated objects humid once treatment is finished.
- Do not leave equipment running unattended.

## User interface

To manage treatments, you must download and install in your device a free app called “Samitech Heat Treatments” either from the App Store (iOS) or from the Play Store (Android). If your device runs under Android, you should download the red icon version.

The application to manage and monitor heat treatments is simple and intuitive.

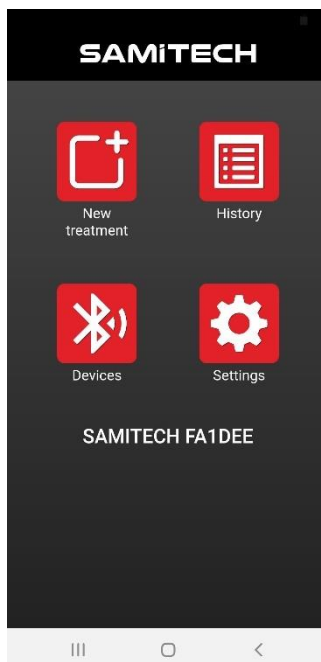
User may determine treatment temperature and duration and monitor its progress.

User may also take pictures of treated objects before and after treatment as proof of their condition.

Once treatment is finished, the App can generate a report including all treatment parameters as well as pictures taken, used energy during treatment and an estimate of its cost. This PDF report can be shared with client by email.

The App is multilingual and will automatically display in the default language on your device. In case that language is not available, English will be displayed by default.

## Main menu



Allows access to all available functions:

- New treatment
- History
- Devices
- Settings

## New treatment

Allows to start a new treatment using all parameters defined in the form. User can define at this point treatment temperature and duration. All these parameters will appear in the Final Report.



Any treatment has 4 stages:

1. **Start up:** At this stage, the app sends start command to Control Unit which runs a self-test to check that everything is running as it should.
2. **Heating:** During this phase heating panels reach defined working temperature.
3. **Treatment:** During this phase, heating panels maintain defined target temperature to eliminate insects
4. **Completed:** At this stage, panels cease to receive power and treatments is completed.

## Advisory and safety notifications

Read and accept some general safety recommendations. There is a field to add user comments and observations that will all appear as typed in the final report.

## Status screen

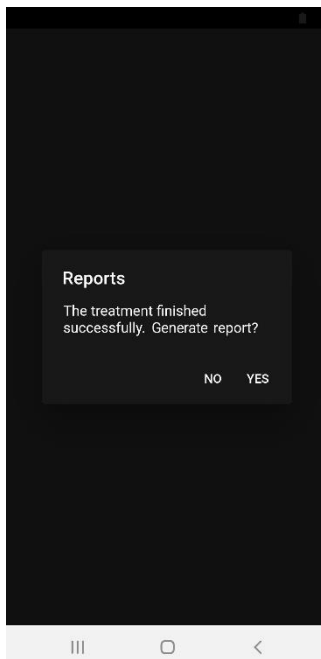
Status Screen shows treatment conditions in real time.

- Current Treatment Stage
- Ambient temperature
- Temperature of each panel
- Elapsed time since start and time to go until end of treatment
- Total energy consumed

If needed, there is a Stop button that will immediately abort current treatment



## Treatment report



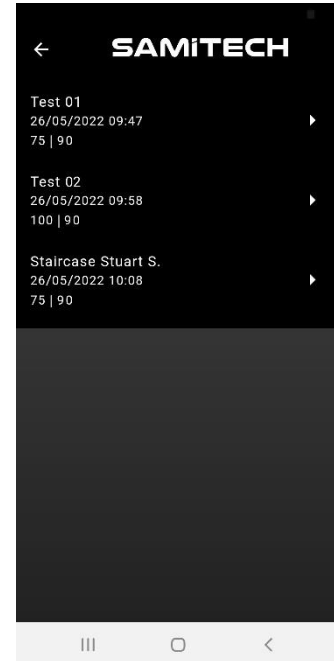
Once treatment is completed successfully, user may choose to generate a detailed PDF report. This report will include all relevant treatment parameters such as temperature, duration, start and end time, temperature progress, remarks typed at time of start and final comments. User may choose at this time to include any pictures taken as proof of state of treated objects.

Generated report can be shared by email, messaging services, social networks or other available apps installed in user's device.

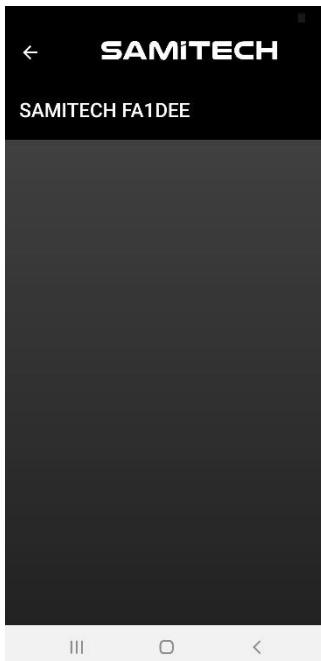


## History

This screen shows a list of all treatments made from given device. By clicking on any treatment, system will show PDF generated report for that treatment which can then be shared.



## Devices



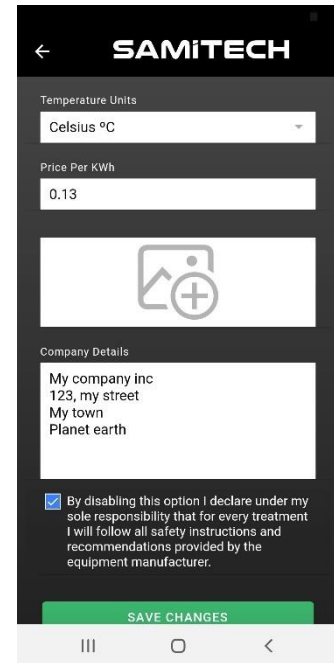
This screen allows to choose which Control Unit is to be controlled in case more than one is within Bluetooth reach. Tapping on any shown unit will set it as default unit for future treatments.

## Settings

This screen allows to define Options and Preferences in the App.

- Temperature unit
- Cost of energy in local currency per kWh
- Pest Control Company's logo and contact details to be used as letterhead in the reports

There is an additional setting option that allows to eliminate the Advisory and Safety Notification screen at the beginning of each treatment. User is nevertheless obliged to comply with all Notifications



## Safety instructions

Please read this section carefully before using this equipment.

User should follow these Safety Instructions at all times.

User is entirely responsible for inadequate use of this equipment, which should be used only as described in this Manual. Any other use can cause fire, explosion, electric shock, damage in equipment, treated objects or humans

### Warnings about fire hazards

Do not treat objects that are composed of combustible, flammable or explosive materials nor objects that could become combustible, flammable or explosive by raising their temperature. Keep any combustible, flammable or explosive material away from the equipment.

Do not treat objects if you ignore their composition or if you have doubts about how they will react when exposed to an increase in temperature.

Do not put at risk the safety of objects, equipment or the place where you plan to do the treatment.

Make sure you have adequate fire detection and extinguishing equipment before you start any treatment.

### Warnings about electrical hazards

This equipment is not designed to be used in bathrooms, laundry areas or similar rooms where it can get in contact with water or high humidity. Never place the equipment anywhere where it could get in contact with water or any other liquid.

Do not place wet or humid objects on the equipment.

Do not use this equipment in the open air.

Do not use this equipment in any place where inflammable products such as petrol, dissolvent, paint or other inflammable liquids are stored.

Do not insert nor allow any object into the ventilation opening of the control unit as it may cause an electric shock, fire or harm the unit.

Do not use this equipment with a damaged cable, plug it into a damaged socket, after it has malfunctioned, has fallen or is damaged in any way. Take the unit to an authorised repair centre for revision, repair or adjustment.

Do not place the cable under rugs, carpets or similar covers. Try to place cables away from areas where someone is likely to stumble.

Do not squeeze nor bend the cable nor use it if harmed.

This device has an overheating protection system that will turn off the heating units in case of overheating or abnormal conditions. If this happens, turn off the device, disconnect it and let it cool down for a few minutes. After you have done this, you can reconnect it and start using it again.

Do not try to open or repair this equipment by yourself. By doing so, it could cause you personal harm.

When you finish each treatment, turn off the unit and disconnect the cables. Wait for some 10 minutes for the panels to cool before you remove treated objects. Never let heating panels touch your skin immediately after treatments.

After your last treatment carefully clean with a dry cloth those parts of the equipment that have been in direct contact with the floor. After doing so, fold the equipment carefully and put everything back into its carrying bag.

**CAUTION:** Some parts of this equipment can get very hot and cause skin burns. Be specially careful if children or other vulnerable persons are around.

**WARNING:** To prevent overheating do not cover control unit nor overlap heating surfaces of control panels. This device should not be placed below a power socket.

**Note:** Some objects are particularly sensitive to heat and could be damaged if exposed to the temperatures reached during treatments. To minimise risk of any damage, these objects should not be treated and should be kept apart during the duration of any treatment.