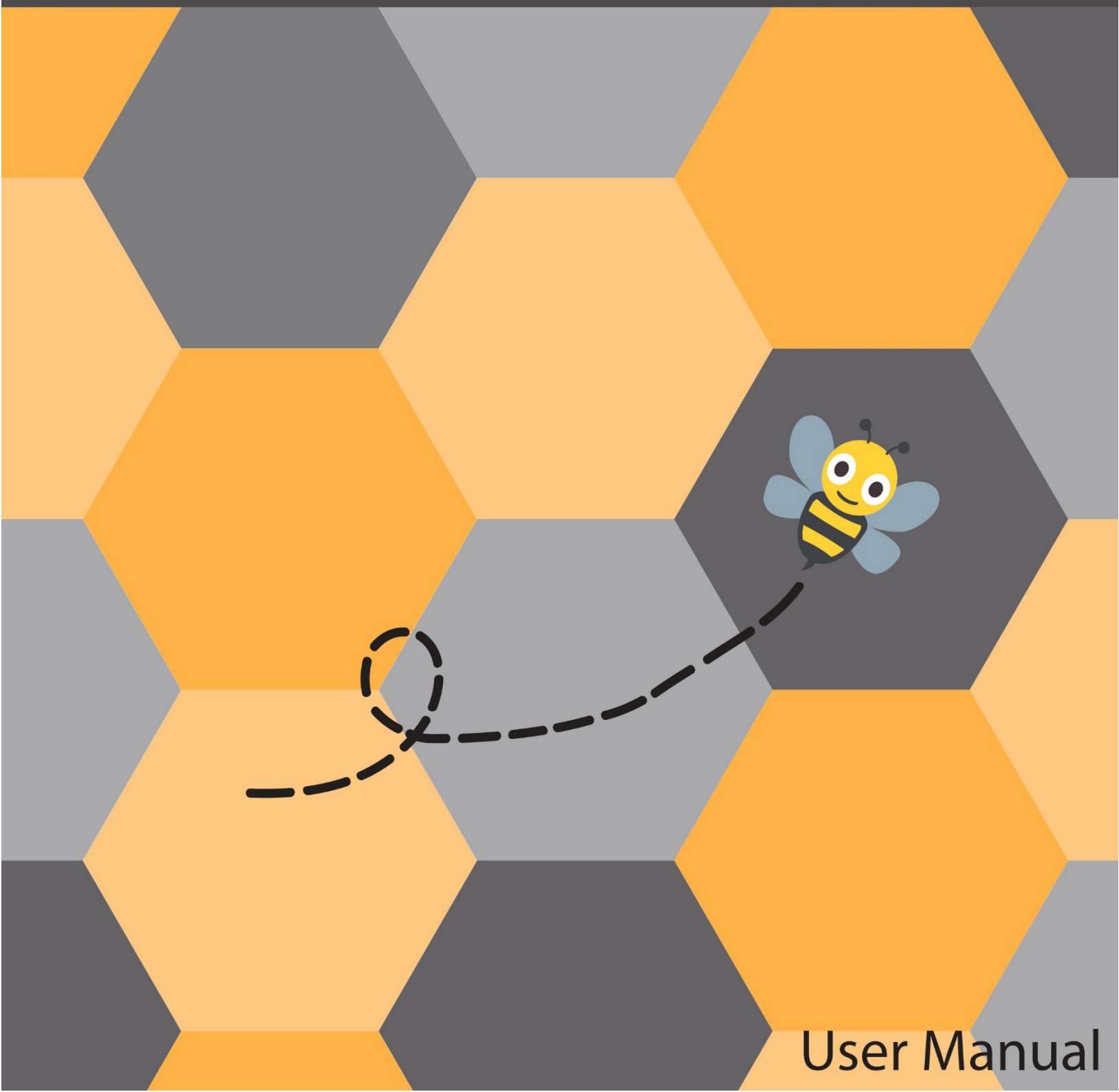
The Modern Hive



User Manual

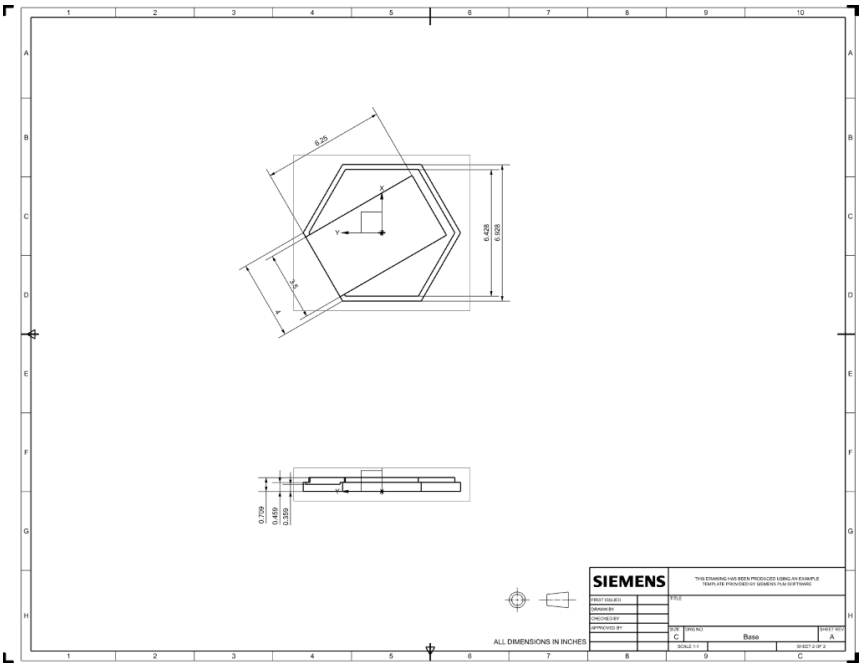
INTRODUCTION

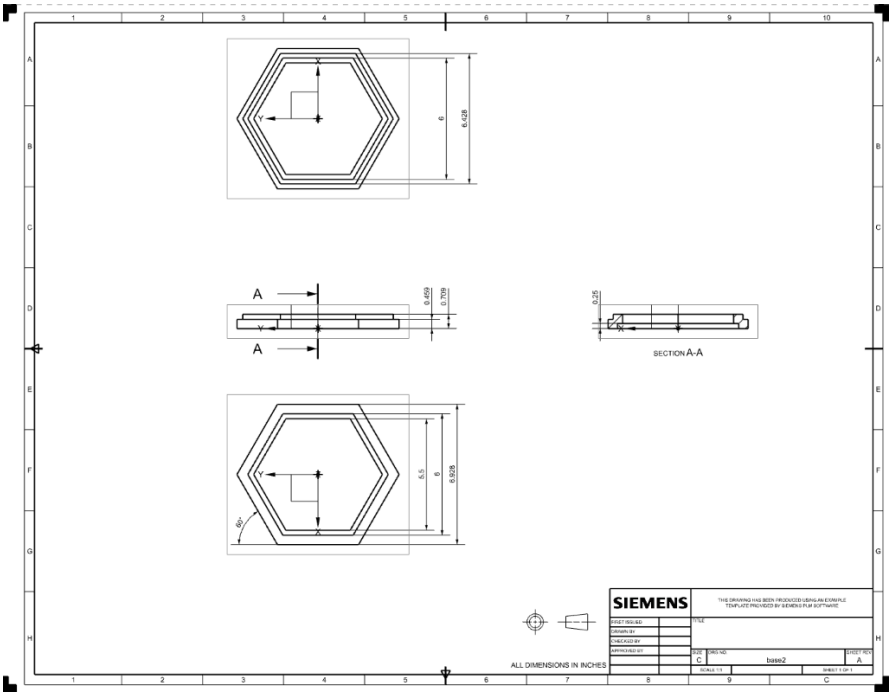
The Modern Hive is an indoor, observational bee hive. The hive sits on a table or stand and features transparent acrylic sheets on all six sides of its hexagonal shape. The hive allows the user to view the bees in the hive and learn from them as they live and work. This hive functions as a top bar hive, so it includes removable bars where the bees build their combs. This allows honey to eventually be harvested from the hive.

Other important components of this hive include: a tube connecting the hive to the outdoors; a rubber fitting that attaches to a window, so the tube can lead outside; a removable bee feeder; ventilation; and a removable cleaning tray. An optional feature not included in this model is electrochromic glass which will allow the sides to darken at night, so external light doesn't disrupt the bees.

This user guide includes all you will need to know about setting up the hive, the functions of the hive, installing bee packages, and maintaining the hive. Please thoroughly read the user manual when receiving The Modern Hive and before installing bee packages.

PRODUCT DIAGRAMS





SAFETY GUIDE

The user should be cautioned of the risks associated with beekeeping. The bars on the top of the hive and the tube connected to the side should never be removed while the hive is indoors. The user should also be aware of local laws pertaining to beekeeping and review any regulations beforehand.

Caution: Keep out of the reach of children.

SETUP INSTRUCTIONS

No assembly is required for The Modern Hive. The hive is to be placed on a table or stand, out of the reach of children. The hive should be placed near a window to reduce the length of tubing leading outside.

Inserting the Tube:

> Measure the amount of tubing needed to reach the window from your hive. Add a little extra just in case. Using scissors, cut the tube to the length needed. Attach one end to the hole on the side of the hive. If you are using the window fitting, the other tube should be attached to the hole in the foam which will allow the bees to travel outside.

Installing the Window Covering:

> Measure the width of the window and mark the width onto the foam window fitting. Using scissors, cut the foam to the measured width, making sure you do not cut off the hole for the tube. After cutting the fitting, open the window, place the foam at the bottom, and close the window, so the foam is held tightly in placed.

HIVE FEATURES AND ACCESSORIES OVERVIEW

Removable Bars

The indoor hive is built as a top bar hive. This type of hive is great for beginner beekeepers because it is easy to remove the bars, and the bees can naturally build their combs on the bars. Our bars sit at the top of the hive and rest on the bevel. They are 1.5 inches wide which is the length bees typically need to build their combs. The bars are cut at a length that will fit the shape of the hexagonal hive. The bottom of the bar is cut into a smaller rectangle which serves as the base for the bees to build their combs. The bars can be removed, and the honey can be harvested. The bars also act as the roof of the hives, so bees are unable to escape.

Transparent Panes

The hive has six transparent panes that act as the walls of the hive. This allows the bees to be observed from all sides. Each pane is approximately 4 in. x 8 in. x 1/8 in. One pane has a hole in it that the tube fits through and has a hole that is covered with mesh for ventilation. This hive was built using laser cut acrylic sheets. The upgraded hive uses new technology called electrochromic glass and is able to darken to stop allowing light to pass through when a current is run through it. The advantage of this is that artificial lights will be unable to be seen within the hive and will prevent the bees from confusing the lights for sunlight, which they rely on for communication and to determine location and time. The electrochromic glass has two layers of electrodes and a separator in between. When voltage is applied to the electrodes, the ions soak into the outside layer and reflect light. This causes the glass to turn opaque. When voltage is reversed, the ions return to their original state, and the glass becomes transparent. This technology is available as either full panes of glass or as adhesive screens. Since this is relatively new technology, this is currently an expensive option and is not used in this version of the hive. Since this hive does not include electrochromic glass, the hive must be covered from artificial light at night. A dark piece of fabric is recommended to block out external light.

Bee Feeder

The bee feeder provides the bees with nutrients such as sugar water for when they do not have enough nectar to sustain themselves. This is particularly important for when starting a new hive. The bee feeder is attached to the bottom of the hive and is able to slide out, so it can be refilled. The bottom of the hive is covered in mesh, so the bees will be unable to escape when the feeder is being refilled. This allows the feeder to be removed and refilled indoors.

Cleaning Tray

The cleaning tray rests at the bottom of the hive and can easily be removed. This allows the bottom of the hive to be cleaned easily without disturbing the bees. The bottom of the hive is covered in mesh, so the tray can be removed indoors without the bees being able to escape.

Tube

The tube connects the hive to the outdoors, allowing the bees to easily travel from the hive to the outdoors. The tube is connected to the side of the hive and fits through the hole in the provided window fitting. When receiving the hive, the tube may be cut to a shorter length if the hive is close enough to a window. The tube is made from clear polyethylene.

Window Fitting

The window fitting is included with The Modern Hive. This allows the tube to be brought outside without having to cut a hole in the wall. The fitting is made of foam and includes a hole that the tube can go through. The fitting can be cut to be able to fit in different sizes of windows and can be placed at the bottom of a window that is cracked slightly open. The fitting seals the window, so air is not coming through it.

Safety Release Trigger

A spring-loaded safety release trigger closes the hole where the tube goes, when the tube is not attached. Quickly push the trigger aside when you attach the tube. The trigger will rest on the tube and in case of failure or loss of the tube, the trigger will close over the opening

Ventilation

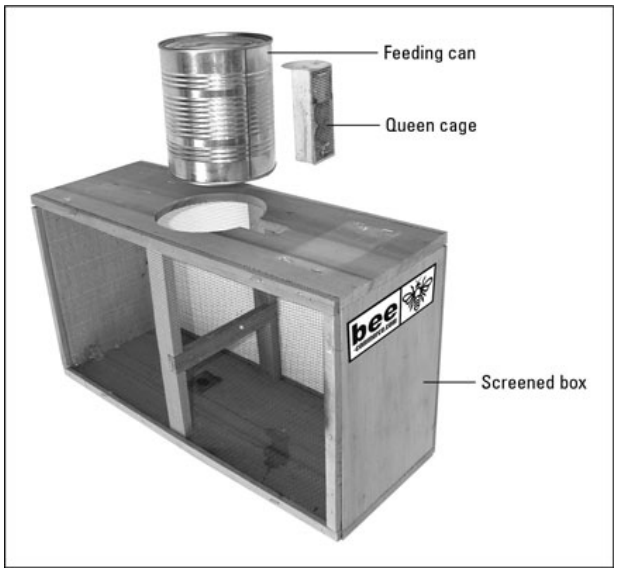
The hive is ventilated through a hole in the side of the hive in one of the transparent panes. This hole is covered in mesh, allowing for ventilation while keeping the bees in the hive.

Top and Bottom Bevel

The top and bottom bevel are made of wood and attached to the panes with screws. The bevels are hexagonal shaped and have two screws on each side. These bevels keep the panes in place and hold the removable bars on top. The bottom bevel is covered in mesh, so the cleaning tray and bee feeder can be placed under it.

INSTALLING BEE PACKAGES

The best time of year to begin your hive is end of April or early May when flowers in your area are at the peak of their bloom. Always take your hive outside before opening to install bees. It is best to install bees when they are least active, which would be early morning, late afternoon, or early evening. Most packages of bees have a cannister of sugar water that when removed, opens the package. Do this carefully and take out the singular queen package. Make sure she is alive and well by looking at her. It is important that the other bees in the hive accept her or she will be killed. Gently poke a hole in the soft end queen package so that the other bees can get her out more easily. Place the queen package in the hive, hooking it on one of the middle removable bars. This hive is unique in that the bees are given a passageway to enter the hive. Attach the provided funneled tube quickly to the bee package and then to your hive. Pour some sugar water in the feeding tray to entice the bees and they will migrate over to the hive. Once all the bees have moved over, it is safe to remove the tube, let the safety release trigger, and move your hive inside!



FAQS

Is it safe to keep the hive in a house, especially around children?

The Modern Hive is designed so bees are always contained within the hive. The hive is safe to have indoors if the top bars are all resting on top, and the tube is connected to the side. The hive should be placed out of the reach of children, so they are unable to tamper with the hive. There are risks associated with beekeeping and installing bees, but the bees should be typically non-aggressive.

When can honey be harvested? How much?

In order for the bees to build up their honey supply, you should wait at least a year before trying to harvest a colonies honey. Once honey is ready to be harvested, put on your protective gear take the hive outside, and remove one of the top bars. The combs can be cut away from the bar by using a sharp knife. The amount of honey you can harvest will vary based on your geographical location. Locations with long winters will need to leave more honey for the bees to survive winter. It's important to look up how much honey you will need to leave for the bees before harvesting. Finding local beekeeping communities and websites will help you find this information.

How can I keep my bees alive?

Worldwide, hives of bees have been dying off more than ever. Due to CCD (Colony Collapse Disorder), it is possible that many of your bees may disappear. Two ways you can help ensure your bees' survival is by not overharvesting honey and by making sure they have plenty of plants to pollinate. Look into local wildflowers that you can plant in your garden to keep your bees and native bees healthy. Getting involved in the local beekeeping community is a great way to learn more about keeping your bees healthy and protecting native bees.