

# OWNERS MANUAL

## BLADE SYNEXIS SYSTEM



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# Safety + Warranty

The Blade is an electrical device. Please read, understand, and follow all safety instructions and considerations in this manual prior to use of your Synexis® System. Retain these instructions for future reference and take all necessary precautions to reduce the risk of fire, electric shock, explosion, or injury.

The Synexis Limited Warranty applies only if the unit is used in accordance with these instructions. Only use genuine Synexis parts and Sails to ensure the proper functioning of your unit and to maintain your warranty.

All HVAC, Electrical, Bulb, and Sail replacements must be performed by a qualified technician.

- ✓ It is required that means of de-energizing the Blade unit be incorporated in the fixed wiring for service and maintenance.
- ✓ If you are uncertain how to properly wire the device, please consult or contract a qualified electrician.
- ✓ This device is designed for a closed duct system. Do not mount it near a return air opening.
- ✓ This device is designed for indoor installation only (i.e. attics, basements, etc.). It is for use in the duct work of gas fired, oil fired, electric and split system heat pump forced air systems. Its NOT designed to be mounted outside on gas fired or heat pump packaged units.
  - Split system heat pumps are systems where the air handler and the air conditioning compressor are separate units.
  - Packaged units are systems where the air handler and air conditioning compressor are built together and installed outside the building.
- ✓ Do not touch the electrical components with wet hands.
- ✓ Do not use outdoors or in a wet environment. This device is for indoor, dry location use only.
- ✓ Do not submerge the Blade system in water.
- ✓ To prevent water damage or electric shock, do not mount this device under a humidifier.
- ✓ Do not use any combustible or flammable items on or near the Blade system.
- ✓ Do not spill or spray any liquids or aerosols into the Blade system or on the DHP® Technology Sail.
- ✓ Do not place the Blade system near a heat source.
- ✓ Do not modify or attempt to modify this product.
- ✓ This device is not intended for use by persons (including children) with reduced physical or reasoning capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction about the use of the Blade device by a person responsible for their safety. Children should be supervised to ensure that they do not play with the device. Cleaning and user maintenance shall not be made by children without supervision.

# Welcome

Thank you for choosing Synexis®, developers of the Dry Hydrogen Peroxide (DHP®) Blade Inline System.

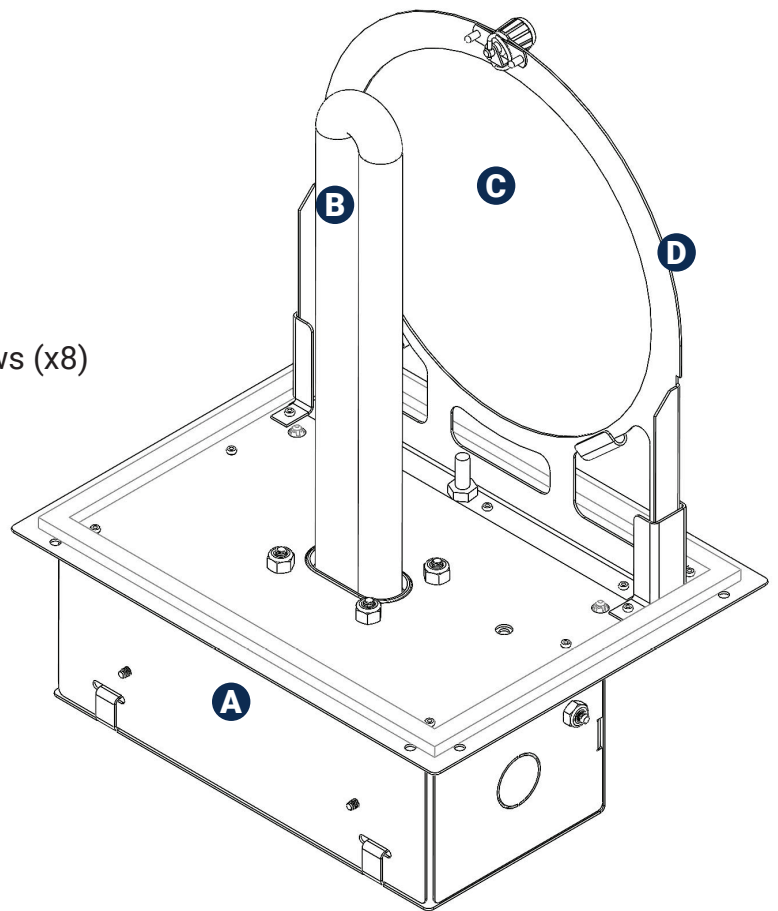
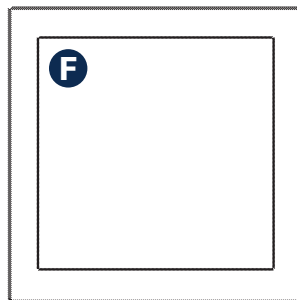
Before using the Synexis system, please take a few minutes to:

- ✓ Familiarize yourself with the Blade Inline device
- ✓ Familiarize yourself with the installation steps and required tools
- ✓ Inspect your system and parts

Please contact your Synexis Account Representative for questions or additional information.

## Included Parts

- A** Blade Inline unit (x1)
- B** UV-A Light Bulb (x1)
- C** DHP Technology Sail (x1)  
(sealed in plastic and sold separately)
- D** Sail Holder
- E** Self-Tapping Sheet Metal Mounting Screws (x8)
- F** Mounting Template (x1)



# About Dry Hydrogen Peroxide (DHP®)

Synexis® is the sole developer of hydrogen peroxide gas and DHP Technology for occupied spaces. Using DHP, our patented microbial reduction technology allows for the natural and continuous reduction of microbial contamination in occupied spaces. Synexis Systems are patented for use in the United States and around the world. By encompassing all areas of an enclosed space, DHP can reach the most important areas of a facility.

Using ambient humidity and oxygen naturally present in your environment, Synexis Technology creates a very low level of hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) gas, which reduces unwanted microbial contamination in the air and on surfaces. Because DHP is a true gas, it can reach the toughest and most out-of-reach areas of your facility. Dry Hydrogen Peroxide is effective because of its state of matter and method of action.

## Indications for Use

This product is not sold as a medical device and is not intended to be used to diagnose any disease or condition, nor should it be used in the mitigation, treatment, or prevention of any disease or condition. The Blade device is a key component to the Synexis System.

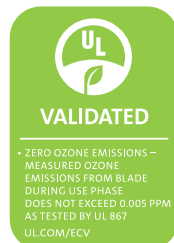
This product is designed to be used in commercial areas.

## Legal Notice

While every attempt is made to ensure the accuracy of the information contained in this manual, Synexis accepts no liability for errors or omissions, or any consequences deriving from the use of information contained herein. This Blade manual is provided “as is” and without any representation, term, condition or warranty of any kind, either express or implied. To the extent permitted by law, Synexis shall not be liable to any person or entity for any loss or damage which may arise from the use of this manual. We reserve the right at any time and without any notice to remove, amend or vary any of the content which appears herein. This product is designed to be used in commercial areas.



Your Synexis Blade  
is Assembled in the USA!



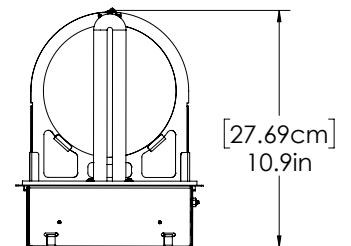
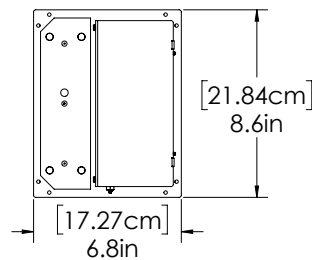
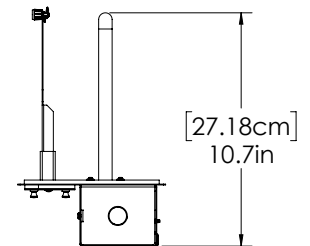
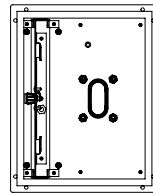
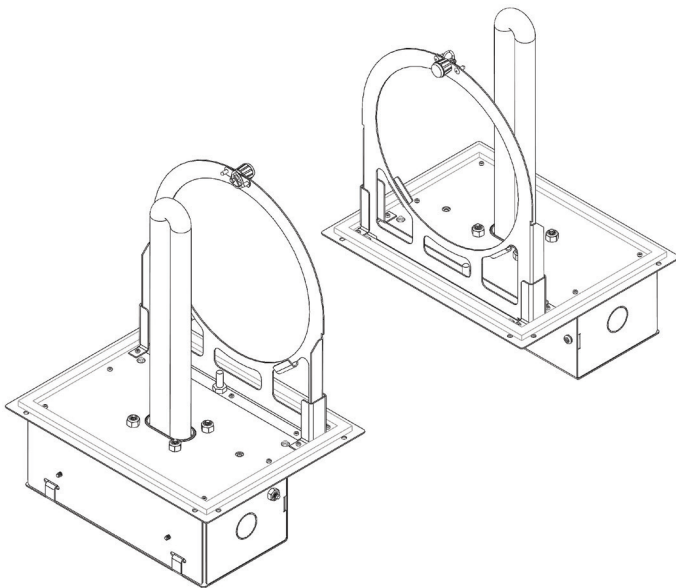
# BLADE

## System Specifications

The Blade is designed to fit in-line with your existing HVAC ductwork. The device can be deployed in any size duct utilizing adapters. The Blade is a completely discreet option for deploying DHP® in your occupied environment. Device installation will not impact your existing HVAC system.

Specifications	
<b>Weight</b>	5 lbs. / 4.3kg
<b>Material</b>	18 Gauge Stainless Steel
<b>Color</b>	Stainless Steel
<b>Dimensions</b>	Width: 8.6" (21.84 cm) Height: 10.9" (27.69 cm) Depth: 6.8" (17.27 cm)

Electrical Requirements	
<b>Input Voltage</b>	120-230V / 50-60 Hz
<b>Current</b>	0.24A/0.13A



# Inspecting Your Synexis® System

After carefully opening the carton, unpack and inspect your Synexis Blade Inline DHP® device.

- ✓ **No damage to the bulb**
- ✓ **No damage to the Sail holder**

DO NOT INSTALL THIS UNIT IF ANY DAMAGE IS NOTED.

If the unit is damaged, contact your distributor or Synexis Technical Support for guidance.

## Prior to Installation

To ensure optimal performance, inspect ductwork prior to installation.

- ✓ **Clean diffusers and ductwork**
- ✓ **Proper level of airflow with no obstructions**
- ✓ **Dampers not located upstream within six feet of the Synexis System**
- ✓ **Dampers not located downstream between the Synexis System and diffuser**

## Tools for Installation

- ✓ **Hole saw or step bit**
- ✓ **Tin snips or sheet metal shears**
- ✓ **Drill or impact driver**
- ✓ **1/4" hex driver bit**
- ✓ **Scissors for trimming duct template**

## Recommended Installation Materials

- ✓ **Foil or duct tape**
- ✓ **Insulation**

# Getting The Best Performance From Your System

## ✓ **Proper number of units to cover your square footage**

The Synexis® System is easy to use. Make sure the proper number of units are installed for the size of the HVAC system and for the square footage of the facility. In some cases, multiple Synexis units may be necessary. Be sure to change the Sail according to the recommended replacement schedule. Leave the replacement Sail in its plastic bag and store it in a dark, dry location until you need to replace the current Sail in your Synexis System.

## ✓ **Doors and windows closed**

The Synexis System is designed for enclosed spaces, so it is important to keep all external windows and doors closed as much as possible. Open windows and/or doors can significantly reduce the efficiency of your system by allowing the DHP® to dissipate out of the facility.

## ✓ **Continuous operation 24/7/365**

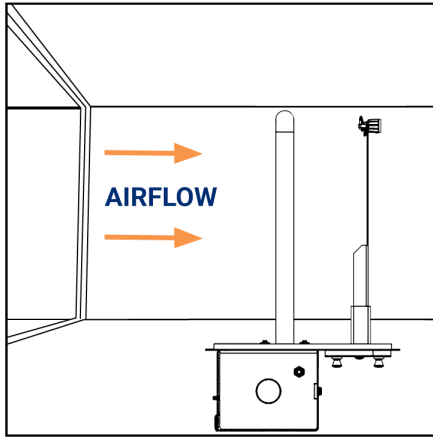
The Synexis System is designed to operate 24 hours a day, 7 days a week. DHP is meant to be a continuous clean technology as opposed to a temporary clean technology. The DHP molecule is delicate and safe at low concentration. Producing it continuously ensures a proper equilibrium concentration in your space for effective decontamination.

## ✓ **Maintain a proper cleaning and replacement schedule**

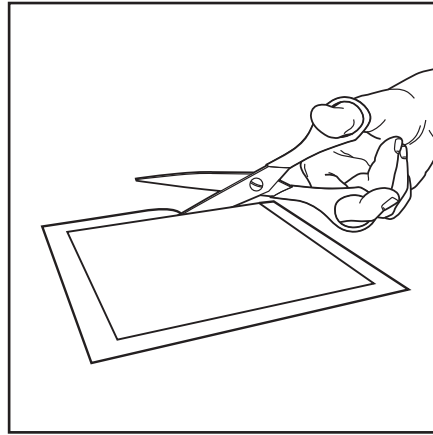
Do not try to repair or adjust any of the electrical components in your Synexis System yourself. Contact Synexis Technical Support at +1 844-352-7680 for assistance and any questions you have about what is covered by your warranty.



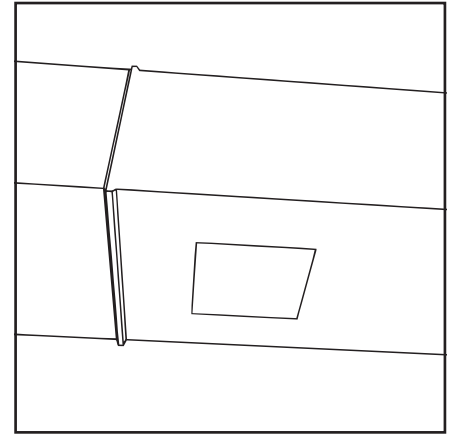
# Installation



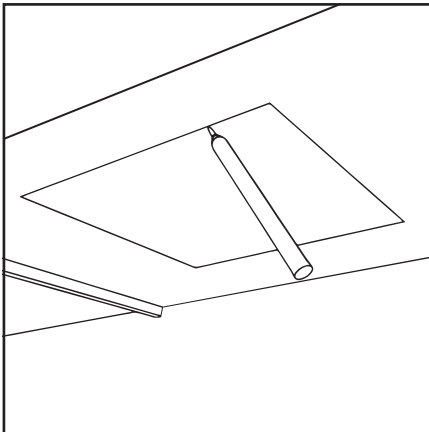
Identify a suitable location for the unit downstream from both the 'A' coil in the supply plenum and from the air filter.



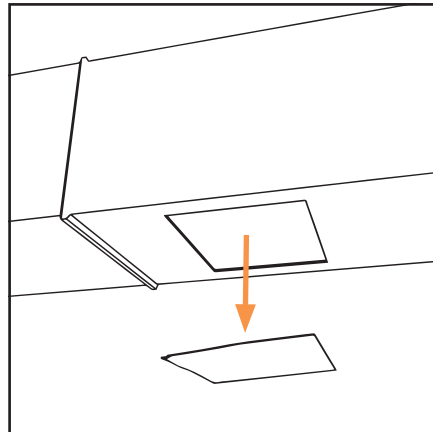
Use provided duct cutout template. Trim off outer excess of the rectangle leaving 'Cut Out Area' to be traced.



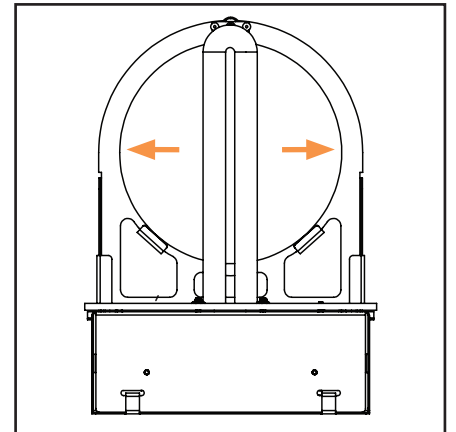
Apply the template to the section of duct that is desired for the installation.



Trace the template with a marker and remove the template.

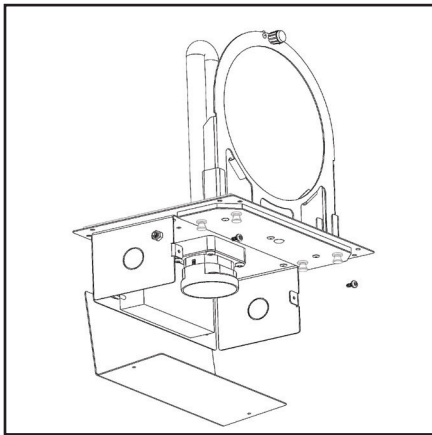


Utilizing a step drill bit, drill a hole within the area of the duct to be removed. Remove the remaining section of sheet metal from the 'Cut Out Area' using a pair of tin snips.

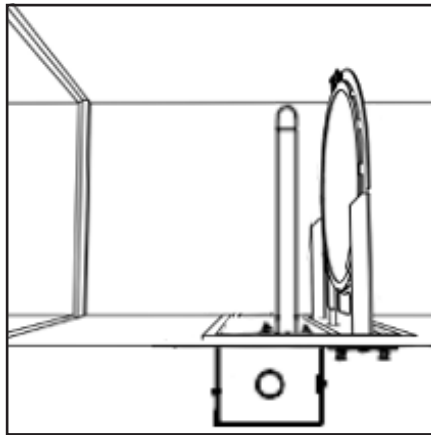


Ensure that the bulb is centered with respect to the Sail frame. Test fit the device to make sure the Sail tray is not obstructed.

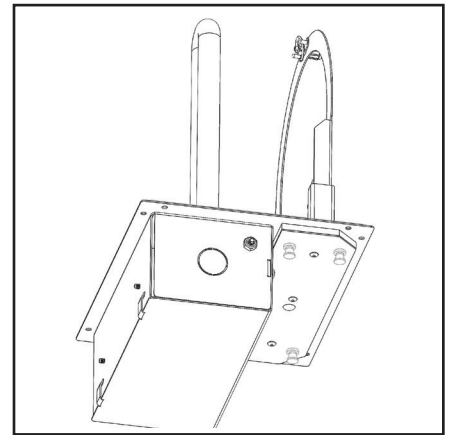
## Installation (cont.)



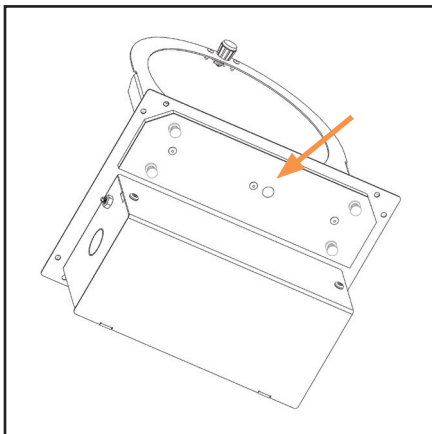
Remove the electrical box cover and the knockout from the electrical housing on the desired side for wiring purposes.



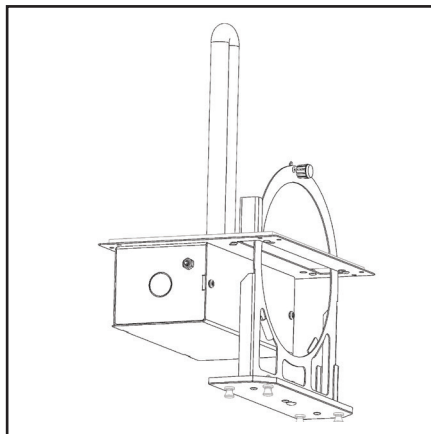
Mount the unit base to the duct using the provided eight (8) self-tapping screws and a drill or impact driver with the 1/4" hex driver bit inserted.



Wire the means of de-energizing the Blade unit to the fixed wiring for service and maintenance. Check with local standards and local electrical codes for the required wire type, size and connectors. Replace the electrical box cover and apply power to the unit.

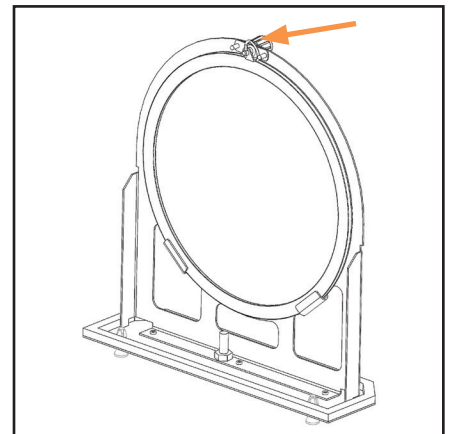


The view port on the bottom of the Sail frame should be glowing purple. This indicates power is running to the Synexis® System and the bulb is operational.



Remove the Sail (the DHP® Technology Sail) from the plastic bag it was stored in. Locate the four (4) push rivets on the base of the unit. Gently insert the Sail with the Sail frame oriented so that the push rivets line up.

The unit is designed so that the Sail can only be inserted in the correct orientation or the push rivets will not line up.



Rotate the knob at the top of the Sail frame 180 degrees so that the clip at the top of the Sail frame holds the Sail in place. After the DHP Sail has been installed into the Sail frame, insert the Sail frame back into the unit and attach the four snap rivets on the base of the unit.

**Power on and inspect your Synexis System**

## Bulb Maintenance

- ✓ All bulb maintenance must be performed by a qualified technician.
- ✓ Replace the bulb every 24 months to maintain the bulb's output intensity. The bulb should operate continuously.

## Bulb Replacement

- ✓ **IMPORTANT:** First, de-energize your Synexis System.
- ✓ Slide the bulb out carefully.
- ✓ Install replacement bulb
- ✓ Gently push the bulb up until seated in the socket.
- ✓ Always wipe off the newly installed bulb to remove any oil or debris.
- ✓ **WARNING:** UV-A bulbs contain a small amount of mercury, like a typical fluorescent bulb. Check with your local waste management authority for local disposal or recycling requirements. Additional disposal and recycling information can be found at: [www.lamprecycle.org](http://www.lamprecycle.org).
- ✓ Power on Synexis System. Ensure bulb and HVAC are properly functioning.

# Sail Replacement

All Sail maintenance must be performed by a qualified technician. Sails are replaced using the typical schedule below. Each Sail comes pre-packaged in a food-grade plastic bag to maintain quality before use. For best performance, the Sail should not be removed from the bag until it is time to insert it into the device. The Sail can be disposed of in regular trash or as recyclable fiber and plastic (fiber and polyester fabric). No special handling conditions are required.

- ✓ **Sail Replacement Timeline:** Every 6 months\*
- ✓ Only use genuine Synexis® Sails to ensure the proper functioning of your unit and to maintain your warranty.
- ✓ For best performance, only handle the outer plastic frame of the Sail.
- ✓ Open four rivets on the base of your Synexis System.
- ✓ Slide the Sail frame out.
- ✓ Turn knob at the top of the Sail frame 180 degrees.
- ✓ Gently remove the used Sail and replace with the new Sail.
- ✓ Seat the Sail into the two lower grooves, then turn the knob at the top of the Sail frame back 180 degrees so that the clip secures the Sail to the frame.
- ✓ Slide Sail frame back into place.
- ✓ Close four rivets on the base of your Synexis System

Do not try to repair or adjust any of the electrical components in your Blade device. Contact Synexis for assistance.

\*Complex environments might require a more frequent Sail change. This is identified on the front-end of a project and would be detailed in the agreement.

# Troubleshooting

- ✓ All Synexis system maintenance must be performed by a qualified technician.
- ✓ If the bulb is not emitting a purple glow, verify that the power is turned on.
- ✓ If the bulb still does not light up, using a voltmeter, verify that the ballast has power on the input side. Check all electrical connections and the electrical breaker if there is no power to the ballast.
- ✓ If the bulb still doesn't light up, using a voltmeter, verify that the ballast is generating an electrical signal to the bulb. If there is no electrical signal going to the light bulb, replace the ballast.
- ✓ If the bulb still doesn't light up, replace the bulb.
- ✓ If problems persist, contact Synexis Technical Support between the hours of 8 AM – 5 PM CST Monday through Friday, at +1 (844) 352-7680 for further assistance.

# Blade Records

The serial number can be found on the bottom of the unit. Please note this number in the space below and keep it for future reference.

Unit Info	
Model	
Distributor	
Serial number	

Distributor Info	
Distributor address	
Date of purchase	
Telephone	

## 1-Year Limited Warranty

Contact your Synexis Account Representative for any device questions, service material needs or device issues. When contacting Synexis® for a system issue that is under warranty, please be prepared to provide the following:

- ✓ The unit and distributor info above
- ✓ A copy of the bill of sale
- ✓ Invoice or receipt of purchase
- ✓ An explanation of the problem or defect

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**Original Instructions**