StellarSky Star Panels

Installers Guide

**Thank you for purchasing Stellar Sky System products.
Remember, if you need any advice or assistance using our products,
please contact us. We are here to help.**

StellarSky Star Panels are the only acoustical fiberoptic star panels that are able to be fully integrated with Home Automation systems.

StellarSky Star Panels do not have static stars like the competition. Our proprietary Star Engine includes modes including a realistic twinkling "Night Sky", your choice of brightness, speed, and many more.

The entire StellarSkySystem was engineered with the ease of installation, only second to quality. The Star Engine integrated into each panel is connected by a single CAT5/6 cable. This cable will carry the 12VDC power and StellarSkySystem communication from your control cabinet/room to your first Star Panel. After the first star panel, simply daisy chain additional star panels with CAT5/6 cables, up to 30 Star Engines.

Please disconnect power before doing any electrical work.

Make sure your installation fulfills any and all building and electrical codes. If you are a homeowner and are not comfortable with electrical work, please contact us. We most likely have a professional installer in your area.

Measure twice, order once.

Customer Satisfaction is our number one goal. Most of the frustrations while installing star panels is due to the slightest mis-measurement of a room. Most rooms are not exactly square or plumb. To measure for a Star Panel, you will want to measure the surface you will be mounting to.

In any room, we suggest leaving "margin" to the adjacent walls, this creates a "window" effect. This also allows for Horizon Perimeter LED to be installed.

If you are able to pre-wire for your project, we suggest taking advantage. All that is required for the Star Panels is one CAT5/6 cable from a control room/cabinet to the ceiling in the predetermined location for the first Star Panel to be installed, up to 30 Star Engines. If the intended installation of the Star Panels is to have no panel to panel seams, a CAT5/6 cable will have to be run between each Star Panel location. If your install is one continuous star field, daisy chaining will be accomplished during install.

If your project includes Horizon Perimeter LED, please see the associated documentation for wiring instructions.

Voltage Drop Calculation

Each Star Panel will have one Night Sky Engine, any special effects added will have additional Night Sky Engines. For panels or special effects with Aurora RGB Engines, each Aurora Engine will count as three Night Sky Engines.

If a single project exceeds 30 Night Sky Engines, to eliminate voltage drop, you will be required to run a "Power Boost Cable" (two conductor wire with a barrel jack connector) at every 30th Night Sky Engine location.

If you need help determining locations or counts of engines, feel free to contact us.

Setting up the Power Adapter or Control Interface with the Power Supply.
All installs should have a CAT5/6 run between a control cabinet/room and the location of the first Star Panel. This cable will need to be terminated on both ends with a RJ45 connector. Please confirm continuity on all pins on handmade cables, one crossed wire or pair may result in damage.

WARNING: StellarSkySystem uses a proprietary RJ45 pinout, it does not conform to any ethernet or POE pinout. StellarSkySystem is a closed system, plugging in any other devices may result in damage.

Installs with a Power Adapter
For projects that don't require control, you will use a Power Adapter to simply transfer 12VDC power into the StellarSkySystem. The Power Adapter and a 12VDC power supply should be close to one another in a control cabinet/room. Included with the Power Adapter is a jumper pre-wired to the green connector. This should be wired into your power supply. Red to V+, Black to V-. Now, plug the CAT5 cable from the Star Panel into the StellarSkySystem out port on the Power Adapter.

Installs with a Control Interface
For projects that will require control using any of our control options, a Control Interface will be required. Using the Control Interface, you eliminate the need for a Power Adapter. The Control Interface will transfer power and communication to the StellarSkySystem. The Control Interface, control source, and a 12VDC power supply should be close to one another in a control cabinet/room. Included with the Control Interface is a jumper pre-wired to the green connector. This should be wired into your power supply. Red to V+, Black to V-. Now, plug the CAT5 cable from the Star Panel into the StellarSkySystem out port on the Control Interface. Connect your control option with either the DB9 connector or the 3-pin green connector. For more information, see the Control Interface documentation.

After the completing the wiring of the Power Adapter or Control Interface, plug in the power supply.

If using any of our control options, please see the respective documentation for the option you have chose.

Testing your panels.
Every panel was tested before it shipped. Sometimes things change in the shipping process. Please test all the panels for operation and if applicable, communication. You should be able to use the run wired to the Star Panel to accomplish this. Once the system is plugged in, connect your CAT5/6 to the StellarSkySystem IN port on your Star Panel. To test communication, any command will do. We suggest using the power toggle command.

Starting the install .... next page.

Starting the install

The first panel is the most important. If your project has a specific panel and location, rely on the information that the order was based on. This first panel is going to determine where the rest of the panels will be. If a drawing hasn't been created yet, we suggest creating one. This is a great way to calculate dimensions as well as keeping track of which order the panels were installed/daisychained and which mode was selected.

Installs should be completed by at least two people, no less than three when installing panels larger than 4' x 4'.

Measuring and marking the locations on the installation surface of all panels edges will help in the installation process. Also, note and mark the orientation on the back of the panels.

Choosing a default mode.

StellarSky Star Panels are shipped by default on Night Sky mode. Any special effects will be defaulted to their respective mode.

If using a Power Adapter in your install, this default mode will be the only mode you will experience. If using the Control Interface, you will be able to send commands to change modes at any time, to any board.

If your boards lose power, they will come back on in the default mode.

You can choose this default mode by changing the dip switches on the Star Engine. Please see **Setting default mode on Star Engines** on page 6.

Installing with Stellar Sky's Magnetic Mounts

1. Using the supplied template, mark the positions of the magnets on the installation surface. You can mark the positions for all the panels, using the template with the panel markings on your ceiling.

2. Using a sufficient fastener, screw the magnets and spacers to the installation surface at the marked locations. Do not over tighten, spacer should be snug to surface. ** DO NOT USE IMPACT DRIVER OR HIGH FORCE, MAGNETS WILL SHATTER **

3. Plug in any connectors for your star panel (i.e. CAT5 cables, Horizon lead wire). If there are more panels in your install, be certain to plug in the CAT5 going to your next panel.

4. Place the panel onto the ceiling. You should hear and feel the magnets engage with the metal plates.

- Be careful not to slide the panels off the metal plates. **The panel will fall if moved off the metal plates.**

5. Repeat steps until all panels are installed.

* Install a Power Boost Cable at every 30th star engine location.

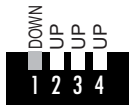If there is any seams between panels that are not flush with each other, this is possibly caused by a few issues. The first step of troubleshooting should be to make sure there is no cables or any obstacles. If your panels are still not sitting even, there is a chance your installation surface isn't straight or plumb. This is a common issue. We have developed a very easy solution that can be done onsite. Please consult with your sales person about having StellarSky's Seam Correction Kit in your toolbox.

Installing with Rotofast™ Anchors

1. Place painters tape on the face of the panel at the designated anchor locations.

2. Push the scratch awl through the panel at the marked locations, keeping the awl as straight as possible.

3. Place your first panel at the designated location on the installation surface. Be certain you are square to your measurements, this panel will determine placement of all other panels, if any.

4. Use the awl to push through the panel and mark the installation surface for anchor locations. Remove the panel from the installation surface.

5. Using a sufficient fastener, screw the Rotofast™ Anchor to the installation surface at the marked locations. The anchor should be able to spin on the screw freely but shouldn't wobble.

6. Flip up the hex insert and firmly push into the body of the anchor.

7. Plug in any connectors for your star panel (i.e. CAT5 cables, Horizon lead wire). If there are more panels in your install, be certain to plug in the CAT5 going to your next panel.

8. Place the panel back onto your installation surface and check your measurements once again. Be certain any cables are not to interfere with the anchors.

9. Insert the installation hex wrench through the hole in the painters tape. You can feel and hear the wrench engage with the hex insert.

10. While providing firm pressure against the panel, turn the anchor counter-closkwise (left). Turn slowly and do not over tighten. You will feel when the anchor is tight within the panel.

11. Leave the painters tape on the panel until the last step of your installation.

12. Repeat steps until all panels are installed.

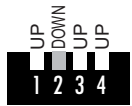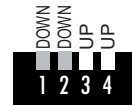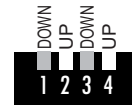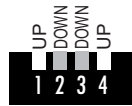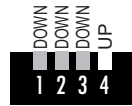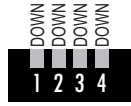* Install a Power Boost Cable at every 30th star engine location.

Installing with your own mounting hardware

1.Plug in any connectors for your star panel (i.e. CAT5 cables, Horizon lead wire). If there are more panels in your install, be certain to plug in the CAT5 going to your next panel.

2. Mount your panel at the designated location on the installation surface. Be certain you are square to your measurements, this panel will determine placement of all other panels, if any.

3. Repeat steps until all panels are installed.
* Install a Power Boost Cable at every 30th star engine location.

Setting default mode on Star Engines

On the Star Engine, there are 4 dip switches that will change the default mode. Following the examples, you can change the up & down combination of the switches to set different default modes.

Star Modes

Night Sky	Night Sky Relaxed	100% SOLID	50% SOLID	25% SOLID	Desert Sky	Stormy Sky	Disco Club

2x2 Mode
4 LED
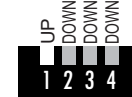
Shooting Star Modes

1 min. interval	5 min. interval	10 min. interval

Meteor Shower Modes

1 min. interval	5 min. interval	10 min. interval

Constellation Mode

100% SOLID

Wiring Diagram

EASY PRE-WIRE WITH ONE CAT 5/6 RUN

TO NEXT PANEL

SIMPLE DAISY CHAIN WIRING WITH CAT 5/6 PATCH CABLES
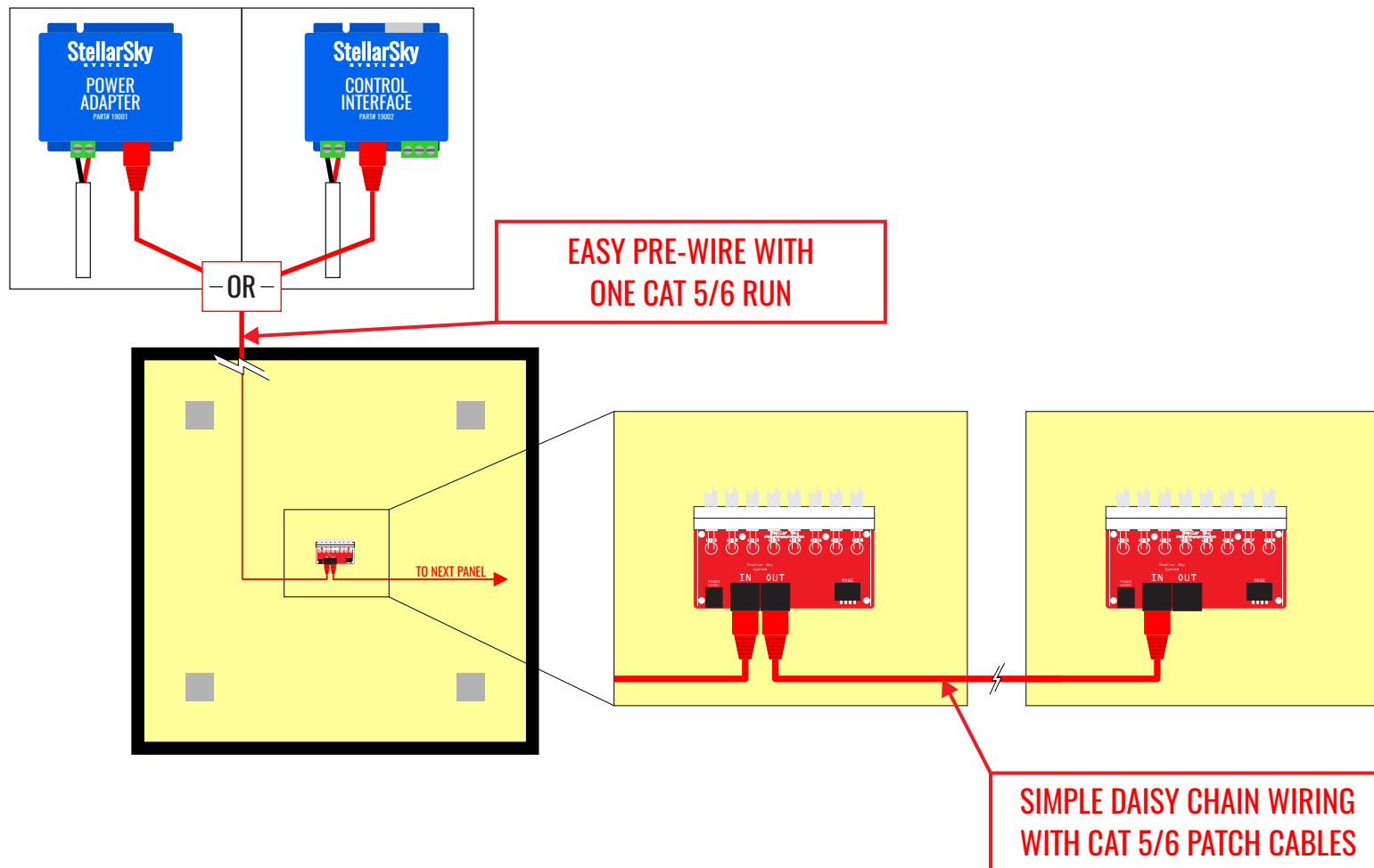
Technical Specifications

Input Power, Connector	DC 12V @ 300mA, StellarSkySystem RJ45 or Barrel Jack
Operating Temp.	0°C ~ 85°C
Operating Humidity	5 ~ 65% RH
Communication Standard	StellarSkySystem, Control Interface required for RS232
Output , Connector	StellarSkySystem w/ Power, RJ45
Size	Standard Sizes listed, Custom Available
Stars (points of light)	7-10 per sq. foot, Custom Available