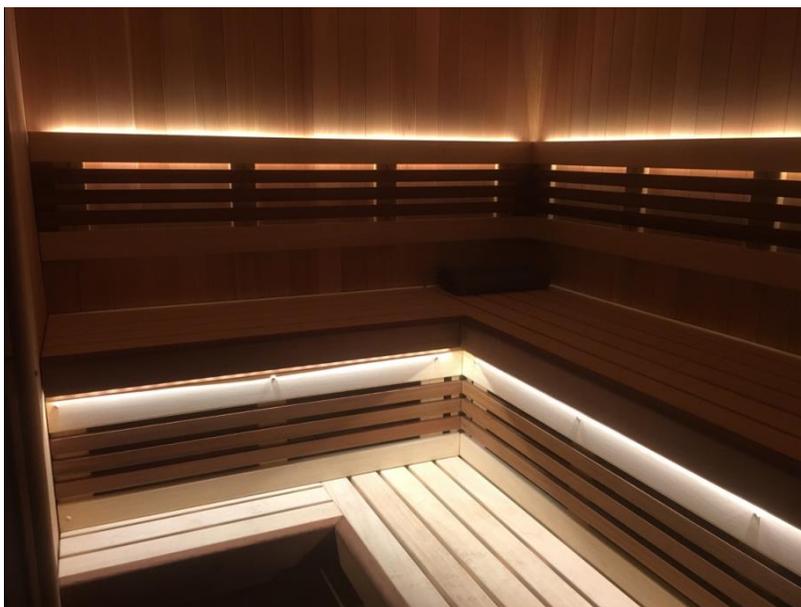


SaunaChrome™ White LED Strip Lighting Using SaunaChrome Control or Switched 115vac Power from your Sauna Control



Installation and User Manual

Pages 2-11: SaunaChrome Control

Pages 12-13: Switched 115vac

Pages 14-16: LED Strip Valance Build and Installation

Pages 17-20: Quick Install Guides



SaunaChrome™ White LED Control Kit Installation

Carefully unpack and inspect your kit to verify the correct components are included. Verify that the serial number on the back of your control matches the one located on page 10 of this manual. The base White kit comes with a “single color” LED touch control and a flush-mount box for recessing the control into your wall. This kit will give you full-function control of your white LED lighting. Designed to be used exclusively with our 8 and 60w 12vdc power supplies, 10cm LED light strips, Recessed Ceiling Pucks and 1w Mini-spot light, all sold separately.

READ INSTRUCTIONS THOROUGHLY BEFORE ATTEMPTING YOUR INSTALLATION!

Components of Base White Kit:

- 9227-337 LED Touch Controller with input/output RJ45 connections
- 8093-065 Recess mounting box
- 2310-10 RJ45 In-line connectors (qty: 2)
- Instruction manual



Verify that the serial number in the warranty section on page 10 of this manual matches the serial number on the back of your touch control.

- Serial number is located on the back of the touch control as shown at right.



Step 1.

Your touch control should come pre-wired with 2 RJ45 cables for input/output power. If you are replacing an existing touch control, connect the 12vdc input cable to the terminal block on the back of the glass touch screen control panel.

- The brown wire will connect to the “V-“ position.
- The white with orange stripe wire will connect to the “V+” position.

Note: The screw terminals may need to be turned counter-clockwise 6-8 turns prior to inserting the stripped wire.



Strip about 3/16” insulation from each wire before inserting into the terminal block.

Step 2.

Attach the 12v LED output cable as shown at right (if not already done at the factory)

- The brown wire will connect to the “L-“ position.
- The White with orange stripe wire will connect to the “L+” position.



Step 3.

Install Flush mount enclosure to exterior of sauna wall. The touch control will mount to this box for a clean, custom installation.

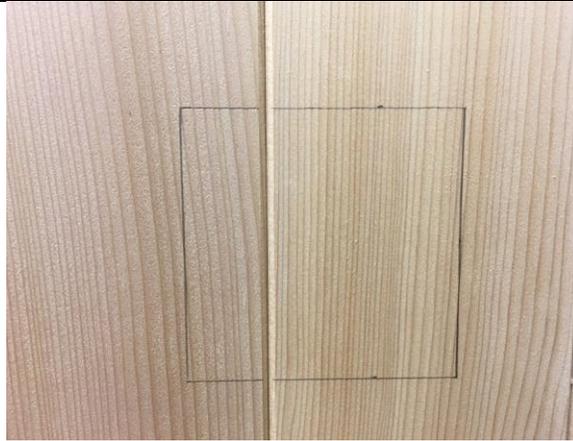
If your project requires a surface-mounted control (ie; poured concrete or block wall), a plastic vapor-resistant box and a metal box for use with conduit are available from TyloHelo.



Vapor Resistant Surface Mount Box: 8093-065
Requires small bead of silicone caulk (not included) around edge to make vapor resistant.



Metal box for use with conduit: 8093-064



Determine the location for your touch control and mark the location with a 3" x 3" "box".

- Make sure this area does not lie directly over framing members or electrical utilities of your sauna wall.
- Use a level to ensure the lines are drawn square.

Hint: Take into account door or window trim that may be added later in your sauna construction. You will want to leave plenty of room for these.



Remove the wall material from the marked area using a jig saw.

- **Verify that no framing members or electrical utilities are located behind this area BEFORE drilling/cutting!**
- Drill out the 4 corners first and simply connect the holes with your jig saw.

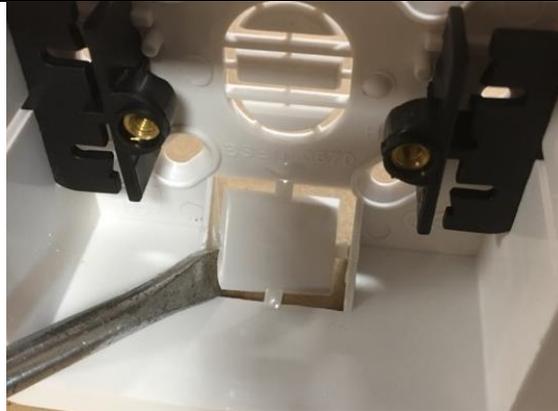


With wall material removed, pre-fit the flush mount enclosure to make sure it fits snug and level in the opening.



When satisfied with the fit of the enclosure in the sauna wall, push the two black tabs outward and pull each forward until they make contact with the back of the wall surface.

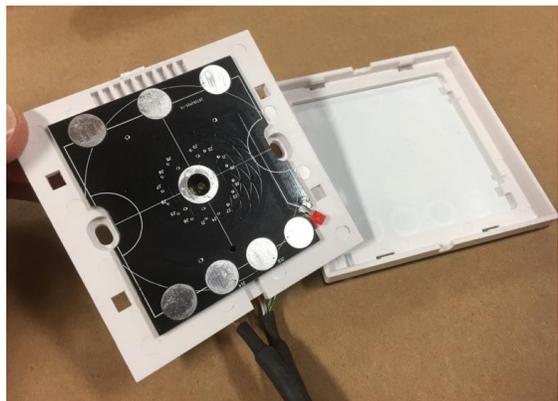




Using a screw driver or utility knife, carefully remove the upper and lower knock-out tabs so the control cables can be routed outside of the enclosure.



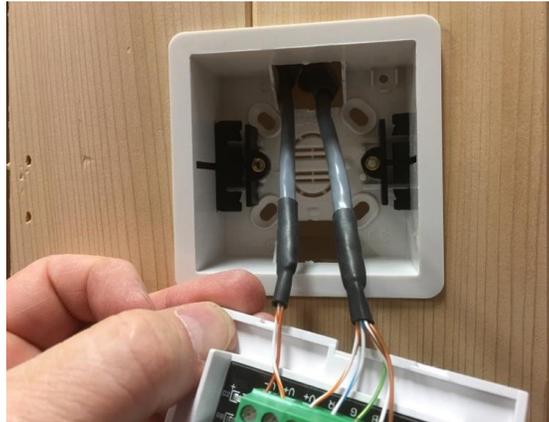
Remove the glass touch panel from the touch control by carefully inserting a small flat-blade screw driver into the slot as shown above and use a twisting/prying action to separate the glass from the control.



Step 4:

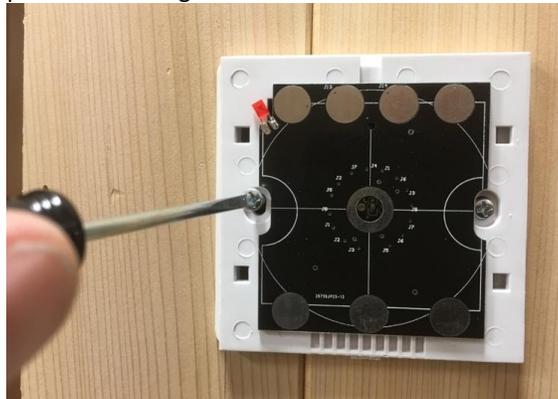
Mount the touch control to the enclosure.

It is important to have access to the back side of your touch control in order to easily connect your power and distribution cables to the control. Leaving the wall open inside the sauna will allow for easy wiring. If leaving the wall open is not an option, you will want to pre-install the CAT5 power and distribution cables at the time of framing and connect them to the control panel by inserting them through the back side of the enclosure before securing the enclosure to the exterior sauna wall.



Insert the two CAT5 cable ends into the upper or lower opening in your enclosure. (upper will allow more cable to be in the wall)

Hint: Pre-install one RJ45 inline coupler to each cable end prior to installing in enclosure.



Secure the panel to your enclosure using the two M3.5 x 30mm screws that were included with your kit.

- Do not over-tighten the screws! Snug them until the panel is firmly held in place.
- Be sure to orientate the panel with the red LED located at the upper left corner, as shown above.

CHECK ORIENTATION OF CONTROL BEFORE SECURING TO YOUR ENCLOSURE!!!



Snap the glass panel onto the control by aligning the notches on the bottom of the panel first then pivoting the glass panel horizontal. Use light pressure to “snap” the glass cover in place.

- Be sure to orientate the glass panel with the small clear “window” aligned with the red LED on the control panel. The power icon should also be correctly orientated with the vertical line in the 12:00 position.



Correctly orientated panel shown above.

Step 5:

Making the electrical connections

The 12vdc input cable on your control should be connected to either our APV-8-12 or APV-60-12 low voltage transformer, included with your specific light kit.



8-port splitter kit included with optional light kits.

Your optional LED light kit includes one 8-port splitter with RJ45 connections. You can connect up to 8 LED light fixtures to your system using this splitter.

DO NOT CONNECT A HOME AUTOMATION OR HOME NETWORK SYSTEM TO THIS SPLITTER!!

DO NOT EXCEED THE RATED WATTAGE OF THE TRANSFORMER YOU ARE USING!!

If the CAT5 cables provided in your kit are not long enough, you may source any CAT5 cable with RJ45 ends (Ethernet) as a substitute.

This splitter can be located in any convenient location such as on top of your sauna or in an adjacent utility room. Never locate the splitter inside sauna cabin UNLESS you are enclosing it inside a water-tight junction box!

- Connect the 12vdc “IN” cable from the touch control to the 12vdc transformer using an RJ45 in-line connector. (if additional length is needed, use any standard CAT5 Ethernet cable) The brown and blue wires from the transformer will need to be connected to a **constant 120vac/15amp power source.**

Note: Your 12vdc transformer may differ from that shown in photos.



- Connect the 12vdc “OUT” cable from the touch control to the male plug on the 8-port splitter via the RJ45 in-line connectors. Once this is done, any of the 8 open ports on the splitter are “live” and can be connected to the LED light bulbs, strips or mini-spot using the shorter (1 & 2 meter cables) provided in your kit. Any extra cable can be simply rolled up and secured with a twist-tie.
- If only installing one light fixture, you can connect directly to the fixture with your CAT5 cable and will not need the 8-port splitter.



Step 8.

Using your touch control

The glass touch control is a “capacitive” device and will only respond to human touch. Do not use any metal or other foreign objects to try operating the control. Reference diagram at right for specific control functions.

Technical Specifications

- 4ch output, 4A/ch or 16A/4ch
- Input voltage: DC5v or DC 12-24v
- Max Power: 80W @ 5v or 192W @ 12v
- Static Power Consumption: <1W

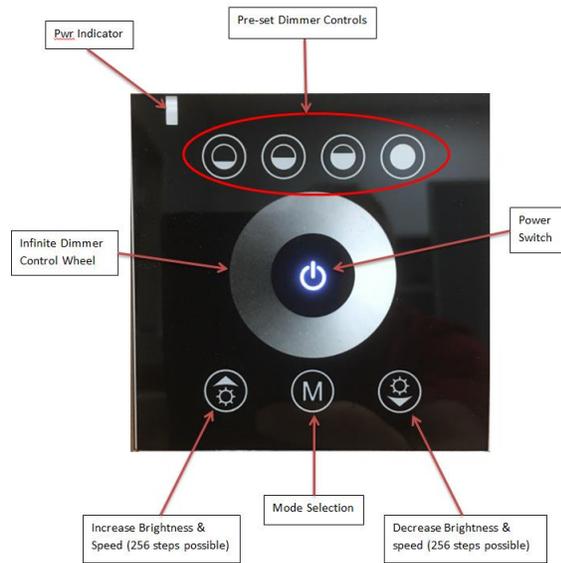
Warranty

TyloHelo Inc. will warrant any component of the SaunaChrome™ light system for a period of 1 year from date of purchase when used as instructed in a sauna environment. Any other use may void the warranty.

Place product serial number in this space

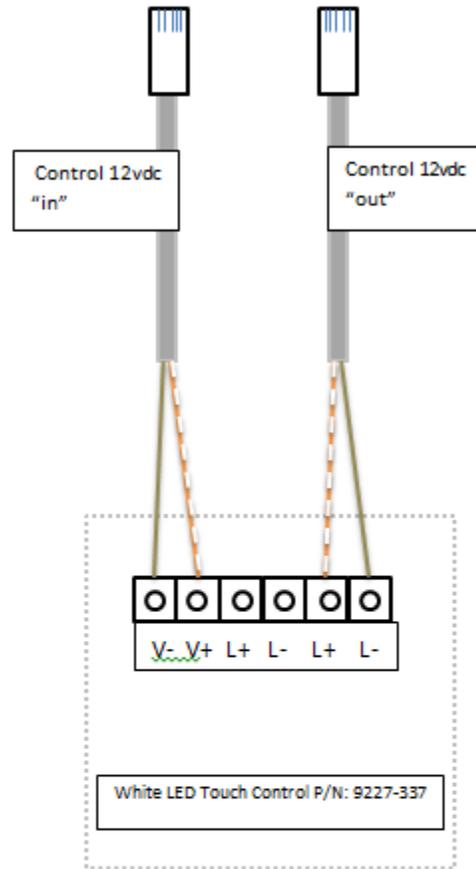
Date of Purchase _____

Contact TyloHelo Technical Support for warranty or installation assistance 1-800-363-0251



NO.	Mode	NO.	Mode
1	Fade	3	25% Brightness
2	Jump	4	50% Brightness
/		5	75% Brightness
/		6	100% Brightness
	Speed Adjustable		Brightness Adjustable

SaunaChrome White LED Touch Control Wiring Diagram



+

RJ45 Pin	Wire Color	Function
1	White/Orange	+12Vdc
2	Orange	N/A
3	White/Green	N/A
4	Blue	N/A
5	White/Blue	N/A
6	Green	N/A
7	White/Brown	N/A
8	Brown	-12vdc

Control 12vdc "IN"

RJ45 Pin	Wire Color	Function
1	White/Orange	+12vdc
2	Orange	N/A
3	White/Green	N/A
4	Blue	N/A
5	White/Blue	N/A
6	Green	N/A
7	White/Brown	N/A
8	Brown	White LED

Control 12vdc "OUT"

Connecting White LED lights to Switched 115vac Power Source.

If having the ability to dim your White LED lights is not necessary, you can connect your lights to operate using your Sauna Heater Control if it has a light switch or you can connect to any switched 115vac power source as well. A typical application would be to connect your White Puck, Valance, Backrest, Under Bench lighting or the Mini-Spot (Gimbal) to a switched 115vac output. The following instructions will illustrate how to connect to either option.

The Sauna Controls listed below are equipped with a built-in light switch. If your heater control is not listed or you have a heater with built-in controls then you will need to provide a switched (standard single pole) 115vac/15amp power source.

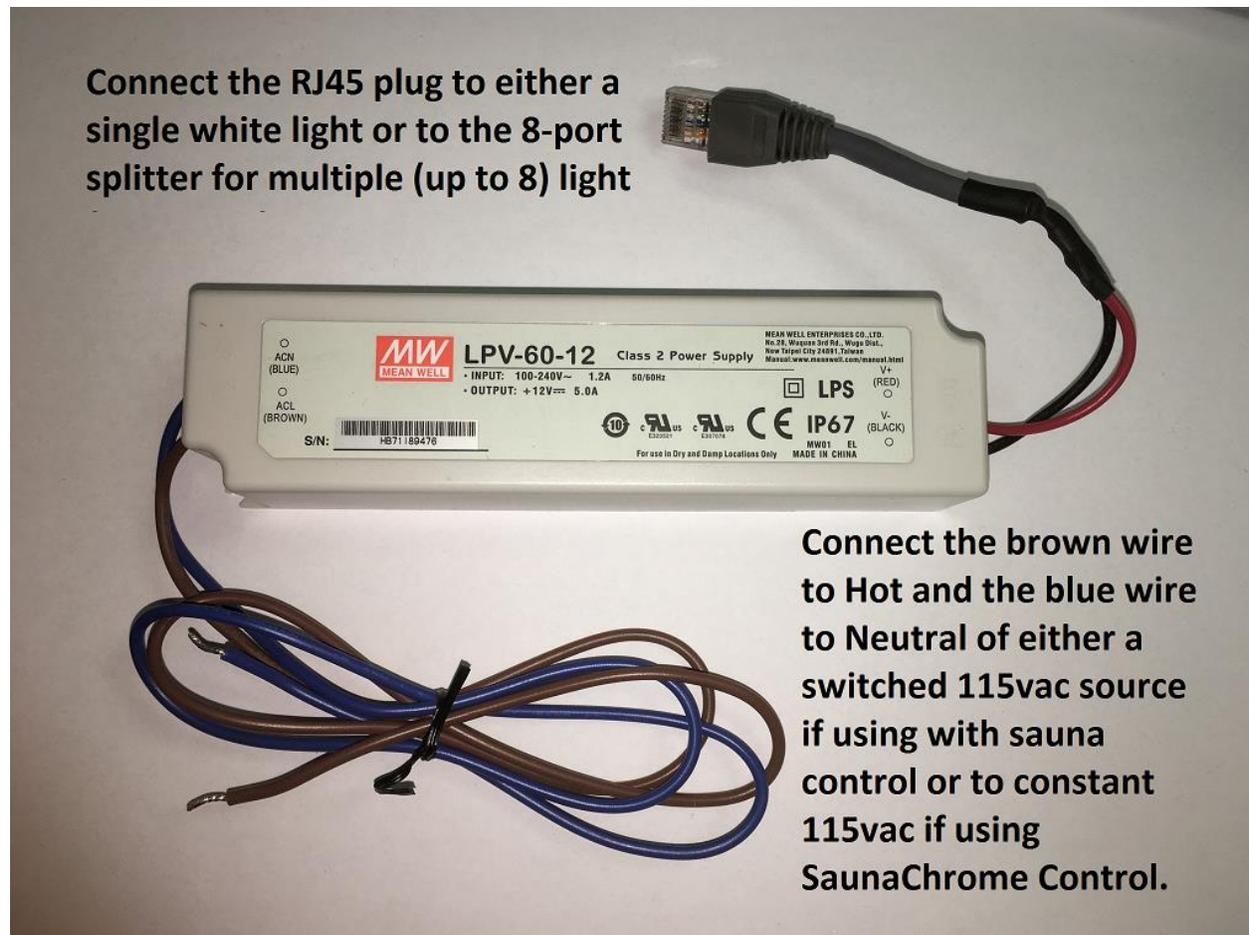
- Trend
- Premium/Elite
-
- T1 (requires separate 15a ckt for lights)
- Digi (1, 2 & 7) (requires separate 15a ckt for lights)
- SC-60, SC-9, SC-Club (requires separate 15a ckt for lights)

All of the controls listed above provide a switched 115vac output with terminal block connections that may be located inside the heater, inside the control or if in a large commercial sauna the connections may be inside a contactor box. You will need to consult the owner's manual for your particular heater to determine where your switched 115vac is located.

Low Voltage Connections:

All of the lights in the SaunaChrome family utilize a CAT5 wiring platform. With the only exception being the 2-conductor wiring harness that connects the individual LED strip lights, all wiring connections are simple plug-n-play with standard CAT5 cables using RJ45 plug ends.

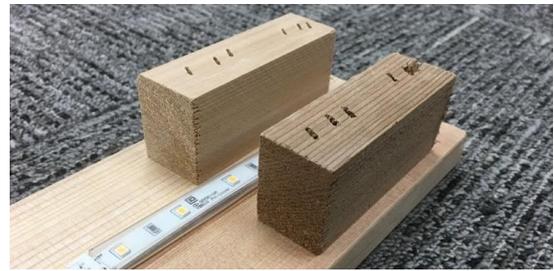
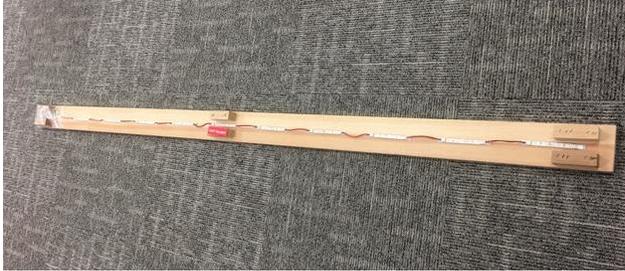
All lighting surfaces (individual light fixtures or continuous run of strip lights) wire to a central hub with a "home-run" format. In other words, each fixture will have a CAT5 cable running to the 8-port splitter. This is the exact method used for a LAN Network BUT do not attempt to connect these lights to a Network or damage to the Network or lights will result!



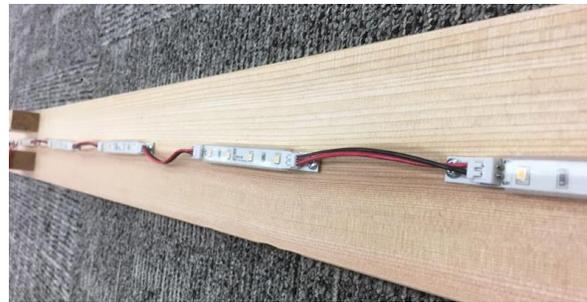
12vdc power for the light system is supplied via either an 8w or 60w power supply that comes with the lighting system. The following photo shows an example of the 60w power supply but the 8w supply will wire in the exact same manor. The Blue and Brown wires will connect to your desired switched power from either the Sauna Heater/Control system or from your single pole light switch. These power supplies are water proof and can be mounted on the interior of your sauna. A typical location would be under or near the bottom of your heater or under the lower bench. While the power supply is water proof, the CAT5 connection is not. So, care must be taken to ensure this connection is not subjected to direct moisture.

How to build & install a simple LED Light Valance Fixture

These steps will work equally well for installing backrest, valance or under-bench LED lights



Backside view of a simple valance built from 1x4 cedar with 1x1 stand-off legs.

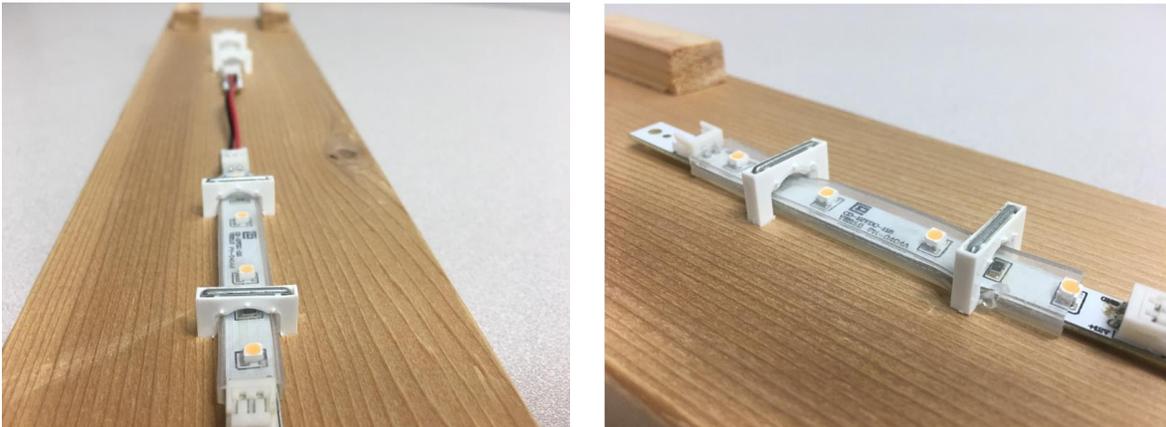


Each LED strip is attached with two screws and connected electrically with a provided wire harness. Make sure each connection is fully seated. Apply a slight tug to each to make sure they will not come apart easily. For best lighting, space each LED strip evenly along the length of the 1x4 but leave a little slack in the wire harness to allow for expansion/contraction during the sauna heating process.

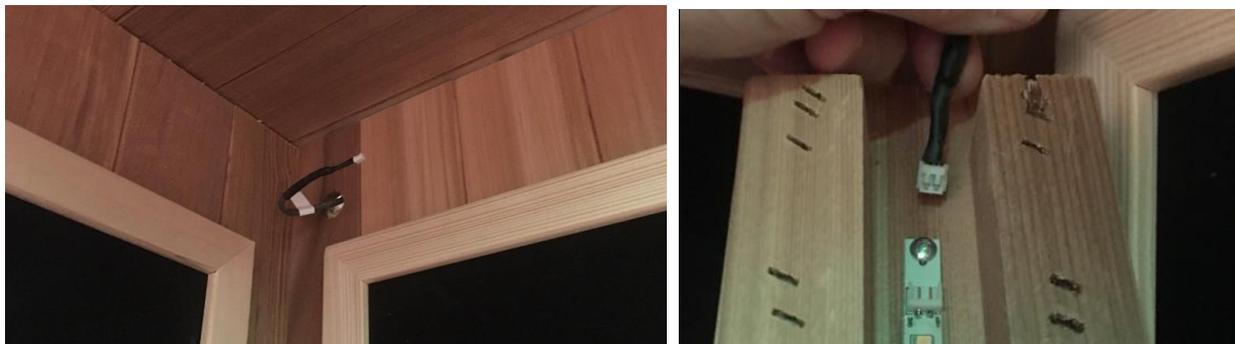


Either end of the Valance Light will have open contacts when all LED's are connected. The power cable from your 12vdc power supply or from your SaunaChrome Touch Control will connect to one of these ends. The other end can remain open. Attach completed valance to sauna wall by drilling/screwing through face of Valance and 1x1 stand off's.

An alternate attachment method is shown below. If you have a large number of LED strips to install, it may be faster/easier to use a T72 staple gun equipped with 3/8" insulated staples to attach the LED strips instead of using the small SS screws. Make sure to position the staples in between the LED diodes to prevent blocking the light or causing shadows. If you do not have access to a T72 staple gun, regular 3/8" Romex staples will also work for this method.



Mounting the Valance to Sauna wall



In this example, the Valance Light will be mounted on the back wall with the electrical connections in the left corner. Drill an access hole in the T&G paneling and feed the 2-conductor end of the special CAT5 cable to the center of where the 1x1 stand-offs will attach to the wall. You will need at least 6" of the 2-conductor cable to attach to the open connection on the LED strip. When mounting the valance you can push the extra wire back into the access hole.



Firmly attach the 2-conductor cable to the open end of the LED strip. Give the cable a gentle tug to make sure the connector is locked onto the LED strip. Push the excess cable back into the wall cavity and secure the valance to the sauna wall with wood screws.



Attach Valance to wall with wood screws. Hint: mounting the Valance closer to the ceiling will give you less light wash on the ceiling. The lower you mount it, the more light wash you will have on the ceiling. You may want to turn the valance on and decide on the best position before securing to wall. Plug screw holes with wood plugs for a finished appearance.



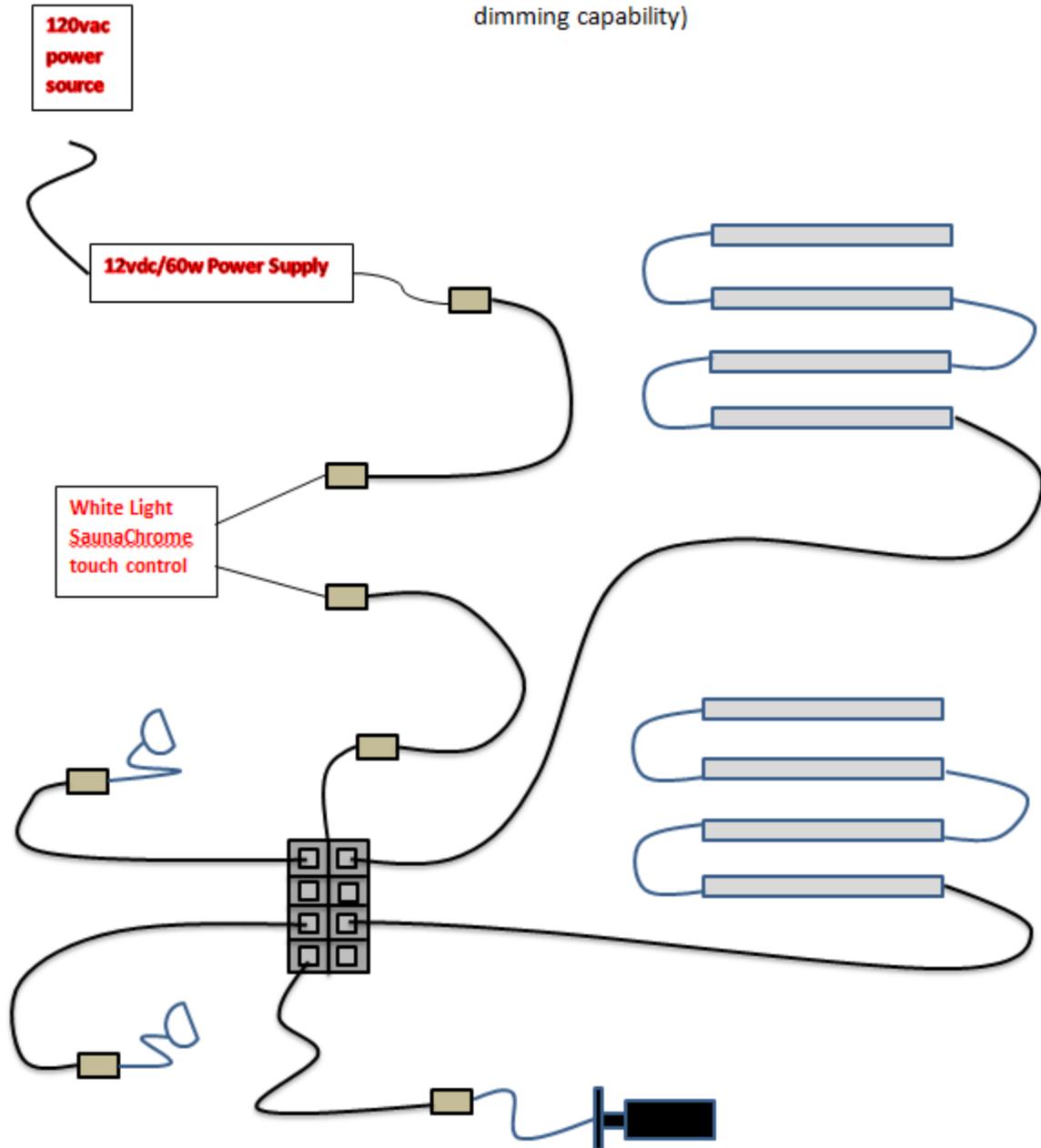
Note: All corner trim should be installed before attaching the Valance Light.

The following “Quick Installation” diagrams on pages 19, 20 & 21 illustrate several different methods of connecting your lights to either a SaunaChrome Touch Control or a simple switched 115vac power source, with no dimming capability.

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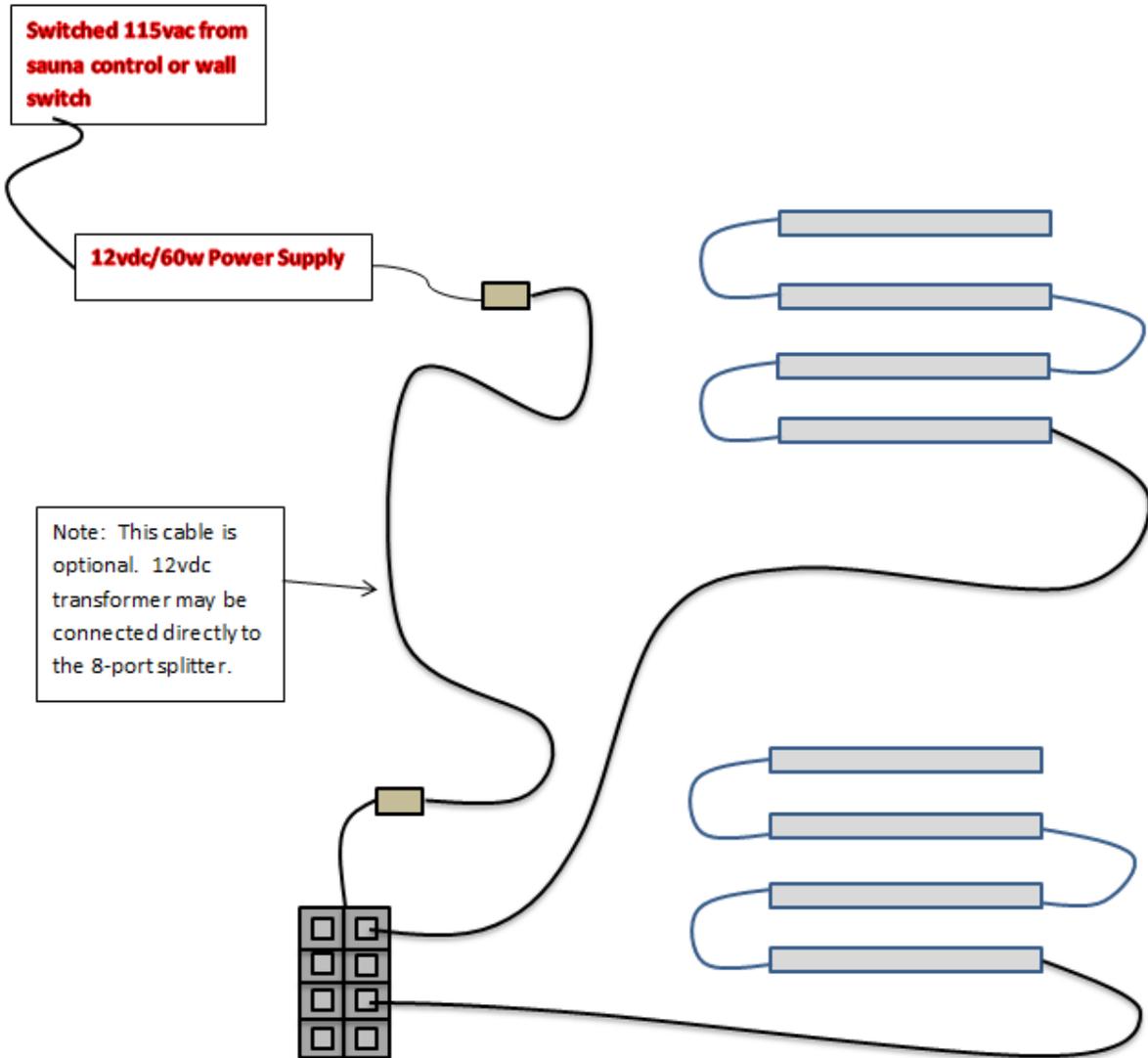
Quick Installation Diagram with SaunaChrome Touch Control

Any combination of LED strips, Pucks or Mini-Spots will work as long as you don't exceed the wattage rating of the 12vdc transformer. (Touch Control provides dimming capability)



Quick Installation Diagram Switched 115vac Supply

Any combination of LED strips, Pucks or Mini-Spots will work as long as you don't exceed the wattage rating of the 12vdc transformer. (No dimming capability)

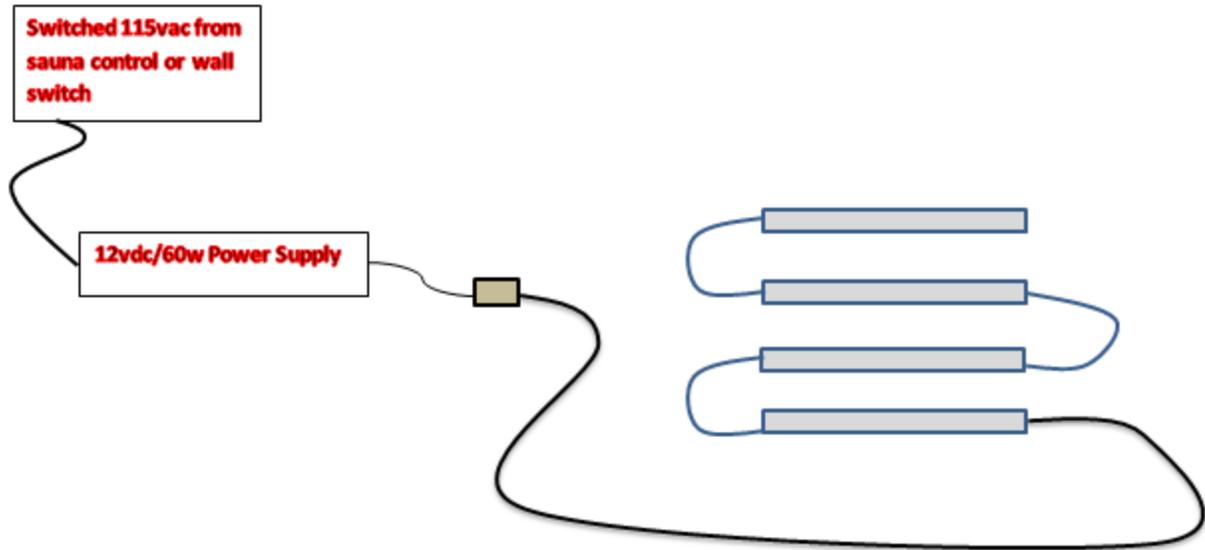


Note: Each wall valance or bench strip will have its own CAT-5/2-pin cable that is "home run" to the 8-port splitter. Up to 8 individual light strips can be connected to the splitter as long as the collective wattage does not exceed 80% of the rated wattage of the 12vdc transformer.

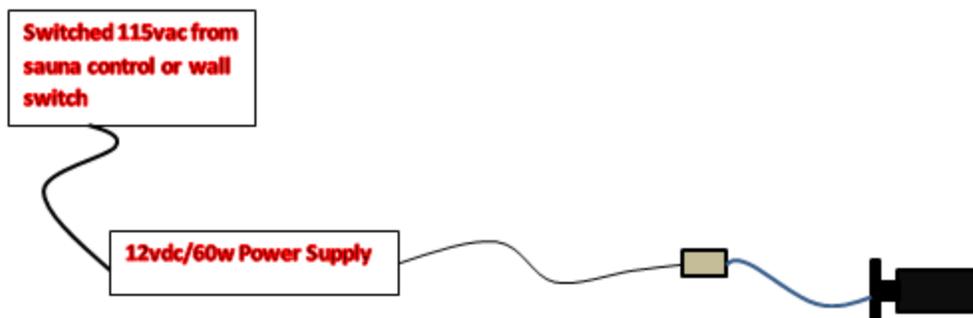
Quick Installation Diagram Switched 115vac Supply

The examples below illustrate a single-light system connected to a sauna control light switch or a single pole light switch. (No dimming capability)

Strip Lights (Valance, Backrest or under bench)



Mini Gimbal Spot Light (over sauna heater)



How to calculate combined watts of your lighting system

Find the wattage rating for the fixture(s) that you are using from the chart below. Multiply this by the number of same fixtures you have for total watts consumed. Never exceed the maximum watts rating of your transformer!!

Fixture Type	Rated Watts each
10cm LED strip	1 watt
MR16 LED Bulb	.5 watt
Mini-Spot, adjustable gimbal	1 watt

Example

To calculate the watts consumed in the example shown on page 14:

8 strip lights = 8 watts + 2 MR16 bulbs = 1 watt + 1 Mini-spot = 1 watt

Total Watts = 10w

The available transformers from TyloHelo are either the APV-8-12 (8 watt) or APV-60-12 (60 watt) so in this example we will need to use the APV-60-12. Our Technical Support and Sales Staff will help you select the correct transformer for your project needs.