VIERTI®

English

030-1009

Dimmer Installation Instructions
Please Leave for Occupant

Incandescent/Magnetic Low-Voltage Dimmer

VT-600:	120 V~ 60 Hz 600 W (600 VA / 450 W)
VT-600M:	120 V~ 60 Hz 600 W (600 VA / 450 W)
VT-1000M:	120 V~ 60 Hz 1000 W (1000 VA / 800 W)

Companion Dimmer

VT-AD:	120 V~ 60 Hz 8.3 A
	277 V~ 60 Hz 6 A

Important Notes:

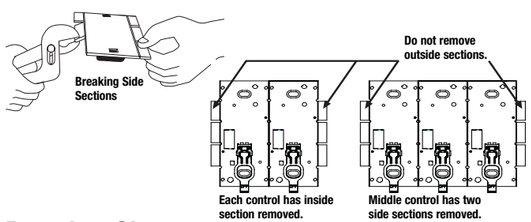
Please read before installing.

1. **To avoid overheating and possible damage to other equipment, do not use to control receptacles, fluorescent lighting fixtures, motor-operated appliances, transformer-supplied appliances, or electronic low-voltage lighting fixtures.**
2. Install in accordance with all national and local electrical codes.
3. When "no grounding means" exists within the wallbox, then the NEC® 2008, Article 404.9 allows a Dimmer without a grounding connection to be installed as a replacement, as long as a plastic, noncombustible wallplate is used. For this type of installation, cap or remove the green ground wire on the Dimmer, and use an appropriate wallplate, such as a Vierti® series wallplate by Lutron.
4. **Operating a dimmed magnetic low-voltage circuit with all lamps inoperative or removed may result in current flow in excess of normal levels. To avoid possible transformer overheating or failure, Lutron strongly recommends the following:**
   - **Do not operate without operative lamps in place.**
   - **Replace burned out lamps as soon as possible.**
   - **To prevent premature failure due to overcurrent, use transformers with thermal protection, or fused primary transformer windings.**
5. Do not paint Dimmers or Companion Dimmers (VT-AD).
6. *Vierti* Dimmers are not compatible with standard 3-way switches. Use only with Companion Dimmers (VT-AD).
7. Companion Dimmers (VT-AD) cannot be used individually but must be used in conjunction with a *Vierti* Dimmer in a 3-way/4-way application.
8. In any 3-way/4-way circuit, use only one *Vierti* Dimmer with up to four Companion Dimmers.
9. **DO NOT** use *Vierti* dimmers for compact Fluorescent (Energy Saver) lamps.
10. The *Vierti* Dimmer may not work with dioded lamps (Sylvania® Designer 16 or Philips® PAR-16).
11. Operate between 32 °F (0 °C) and 104 °F (40 °C).
12. The *Vierti* Dimmer may feel warm to the touch during normal operation.
13. Recommended wallbox depth is 2.5 in (64 mm) minimum.
14. Maximum total wire length between all *Vierti* devices is 100 ft (30.5 m).
15. For new installations, install a test switch before installing the Dimmer, or test with a breaker.

Multigang Installation

Vierti wallplates are available in one to six gang versions. When combining controls in a wallbox, derating is required; see the Derating Chart below.

Note: Companion Dimmers do not need to be derated.



Derating Chart

Dimmer Type	Maximum Load		
	No Sides Removed	1 Side Removed	2 Sides Removed
Incandescent/Halogen			
600 W	600 W	500 W	400 W
1000 W	1000 W	800 W	650 W
Magnetic Low-Voltage			
600 VA / 450 W*	600 VA / 450 W*	500 VA / 400 W*	400 VA / 300 W*
1000 VA / 800 W*	1000 VA / 800 W*	800 VA / 650 W*	650 VA / 500 W*

* The maximum lamp wattage is determined by the efficiency of the transformer, with 70%—85% as typical. For actual transformer efficiency, contact either the fixture or transformer manufacturer. The total VA rating of the transformer(s) shall not exceed the VA rating of the Dimmer.

LUTRON®

Lutron Electronics Co., Inc.
7200 Suter Road
Coopersburg, PA 18036-1299 U.S.A.

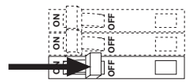
Made and printed in U.S.A. 6/08 P/N 030-1009 Rev. A

Lutron Technical Support Center 1.800.523.9466 24 hrs / 7 days www.lutron.com

Preparing for Installation

1 Turning Power OFF

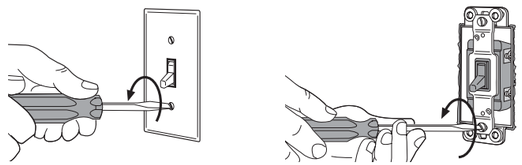
- Turn power OFF at circuit breaker (or remove fuse).



WARNING: Verify that power is OFF before proceeding. Failure to turn power OFF could cause death or serious injury.

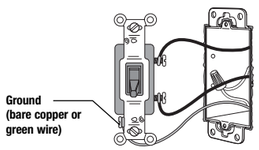
2 Removing the Wallplate and the Switch

- Remove the wallplate and the switch mounting screws.
- Carefully remove the switch from the wall **(do not remove wires)**.



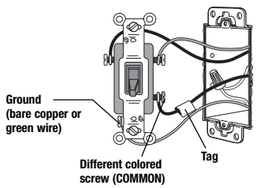
3 Identifying the Circuit Type

3a - Single-Location Control



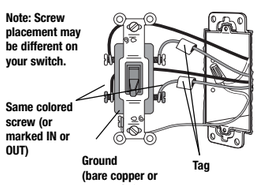
One switch controlling a light fixture.
This will be a single-pole switch. The switch will have two insulated wires connected to two screws of the same color plus a bare copper or green insulated wire to a green ground screw.

3b - Two-Location Control



Two switches controlling a light fixture.
Both will be 3-way switches. Each switch will have insulated wires connected to three screws plus a bare copper or green insulated wire to a green ground screw. One of these wires is connected to a screw of a different color (not green) or labeled COMMON. **Tag** this wire on both switches to identify when rewiring.

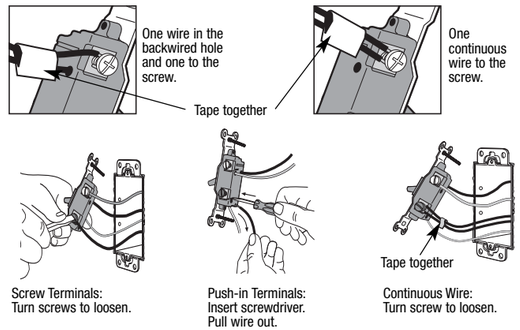
3c - Three or More-Location Control



Three or more switches controlling a light fixture.
Two will be 3-way switches and any others will be 4-way switches. **Tag** the wires of the two 3-way switches as in the Two-Location figure above. The 4-way switch will have insulated wires connected to four screws plus a bare copper or green insulated wire to a green ground screw. **Tag** two insulated wires that are connected to opposite color screws. Follow this procedure for each 4-way switch.

4 Disconnecting the Switch Wires

Important Note: Your wall switch may have two wires attached to the same screw (see illustrations below for examples). Tape these two wires together before disconnecting. When rewiring, connect these wires to the Dimmer the same way they were connected to the removed switch.



Screw Terminals: Turn screws to loosen.

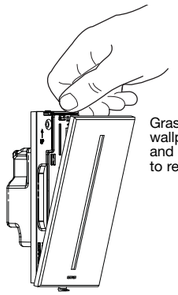
Push-in Terminals: Insert screwdriver. Pull wire out.

Continuous Wire: Turn screw to loosen.

Installing the Dimmer

5 Removing the Front Wallplate

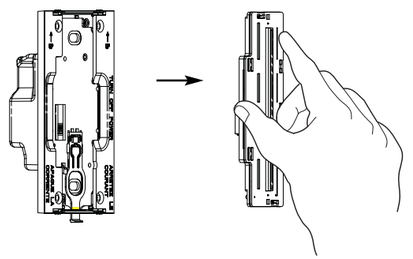
- The Dimmer has a pre-installed *Vierti* wallplate. Remove the wallplate before proceeding with the installation.



Grasp *Vierti* wallplate at top and pull forward to remove.

6 Removing the Front Module

- The Dimmer has a pre-installed front module containing LEDs. Before proceeding with the installation, grab the module and pull it straight out. Removing the Front Module will expose the mounting holes.



Grasp front module on sides and pull to remove.

7 Wiring the Dimmer

Important Wiring Information

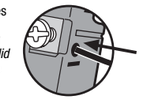
When making wire connections, follow the recommended strip lengths and combinations for the supplied wire connector. **Note:** All wire connectors provided are suitable for ***copper wire only.*** For aluminum wire, consult an electrician.

Wire Connector:
Use to join 14 AWG (1.5 mm²) or 12 AWG (2.5 mm²) ground wire to 18 AWG (0.75 mm²) ground wire.

Twist wire connector tight.

Trim or strip wallbox wires to the length indicated by the strip gauge on the back of the switch.

Push-in Terminals: Insert wires fully.
Note: Push-in terminals are for use with 14 AWG (1.5 mm²) *solid copper wires only.* DO NOT use stranded or twisted wires.

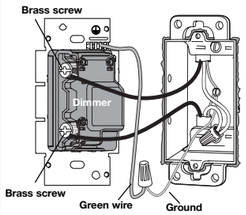


or

Screw Terminals: Tighten securely.
Screw terminals are for use with 12 AWG (2.5 mm²) or 14 AWG (1.5 mm²) *solid copper wires only.* DO NOT use stranded or twisted wires.

- For installations involving more than one control in a wallbox, refer to Multigang Installations before beginning.

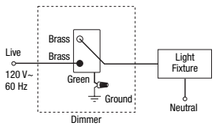
7a - Single-Location Control - Single-Pole Unit



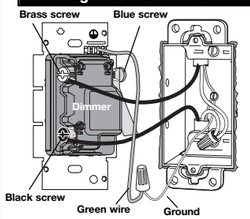
Wiring Dimmer VT-600:
- Connect the **green** ground wire on the Dimmer to the **bare copper** or **green** ground wire in the wallbox. (See Important Note 3.)
- Connect either of the wires, disconnected from the removed switch, to a **brass** screw terminal on the Dimmer.
- Connect the remaining wire, disconnected from the removed switch, to the other **brass** screw terminal on the Dimmer.

This operation has now been completed.

Reference Wiring Diagram



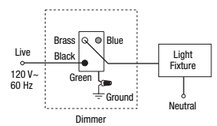
7b - Single-Location Control - Multi-Location Unit



Wiring Dimmers VT-600M, VT-1000M:
- Tighten the **blue** screw terminal on the Dimmer. **The blue screw is not used in a single-pole circuit.**
- Connect the **green** ground wire on the Dimmer to the **bare copper** or **green** ground wire in the wallbox. (See Important Note 3.)
- Connect either of the wires, disconnected from the removed switch, to the **brass** screw terminal on the Dimmer.
- Connect the remaining wire, disconnected from the removed switch, to the **black** screw terminal on the Dimmer.

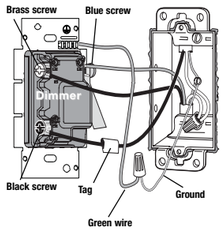
This operation has now been completed.

Reference Wiring Diagram



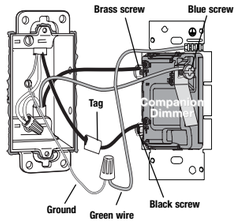
7c - Two-Location Control

One location will be replaced with a Dimmer and the other with a Companion Dimmer.



Wiring Dimmers VT-600M, VT-1000M:

- Connect the **green** ground wire on the Dimmer to the **bare copper** or **green** ground wire in the wallbox. (See Important Note 3.)
- Connect the tagged wire, disconnected from the removed switch, to the **black** screw terminal on the Dimmer.
- Connect one of the remaining wires, disconnected from the removed switch, to the **brass** screw terminal on the Dimmer.
- Connect the remaining wire, disconnected from the removed switch (note wire color), to the **blue** screw terminal on the Dimmer.

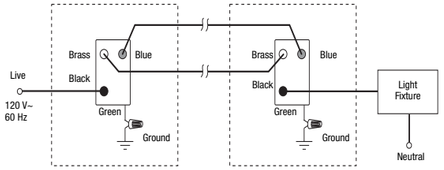


Wiring Companion Dimmer (VT-AD):

- Connect the **green** ground wire on the Companion Dimmer to the **bare copper** or **green** ground wire in the wallbox. (See Important Note 3.)
- Connect the tagged wire, disconnected from the removed switch, to the **black** screw terminal on the Companion Dimmer.
- Connect the same color wire connected to the **blue** screw terminal on the Dimmer (wire color noted above) to the **blue** screw terminal on the Companion Dimmer.
- Connect the remaining wire, disconnected from the removed switch, to the **brass** screw terminal on the Companion Dimmer.

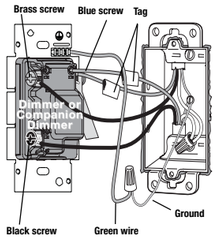
This operation has now been completed.

Reference Wiring Diagram



7d - Three or More-Location Control

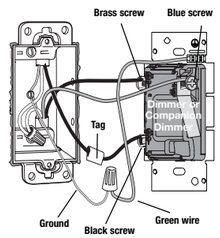
One location will be replaced with a Dimmer and the others with Companion Dimmers. **Only one Dimmer** can be used with up to four Companion Dimmers.



Replace the 4-way switch(es):

Note: 4-way switches may be replaced with either a Dimmer or a Companion Dimmer.

- Connect the **green** ground wire on the Dimmer/Companion Dimmer to the **bare copper** or **green** ground wire in the wallbox. (See Important Note 3.)
- Connect both of the tagged wires (note their color), disconnected from the removed 4-way switch, to the **blue** screw terminal on the Dimmer/Companion Dimmer (one wire to the screw and the other to the push-in terminal).
- Connect one of the remaining wires, disconnected from the removed switch, to the **black** screw terminal on the Dimmer/Companion Dimmer.
- Connect the remaining wire, disconnected from the removed switch, to the **brass** screw terminal on the Dimmer/Companion Dimmer.

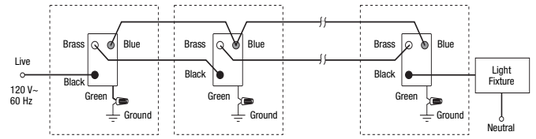


Replace the 3-way switches:

- Connect the **green** ground wire on the Dimmer/Companion Dimmer to the **bare copper** or **green** ground wire in the wallbox. (See Important Note 3.)
- Connect the tagged wire, disconnected from the removed switch, to the **black** screw terminal on the Dimmer/Companion Dimmer.
- Connect the same color wire, connected to the **blue** screw terminal on the Dimmer/Companion Dimmer (that replaced a 4-way switch; wire color noted previously) to the **blue** screw terminal on the Dimmer/Companion Dimmer.
- Connect the remaining wire, disconnected from the removed switch, to the **brass** screw terminal on the Dimmer/Companion Dimmer.

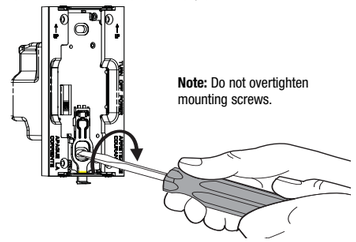
This operation has now been completed.

Reference Wiring Diagram

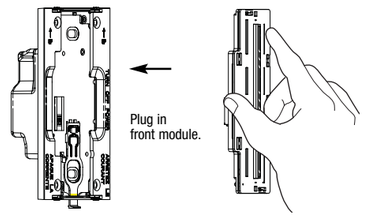


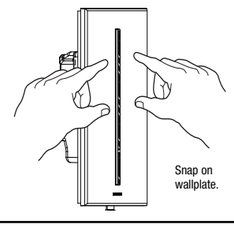
8 Mounting the Dimmer or Companion Dimmer(s) to the Wallbox

- Form wires carefully into the wallbox, mount and align Dimmer (and Companion Dimmer).
- Install the front module and the wallplate.



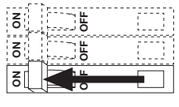
Note: Do not overtighten mounting screws.





9 Turning Power ON

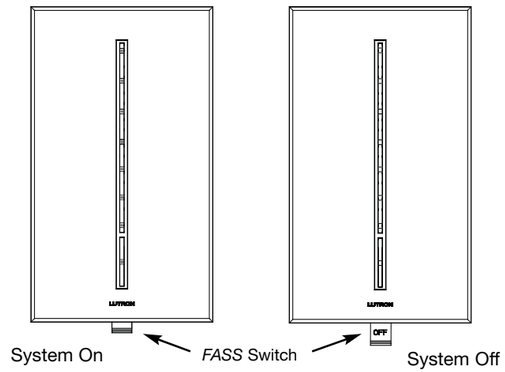
- Turn the power ON at the circuit breaker (or replace the fuse).



10 Dimmer Operation

Turning the System On/Off

Turn the system on by pushing the Front Accessible Service Switch (FASS™) up. Pulling the *FASS* switch down, removes power from the load.
Note: The *FASS* switch is not used during normal operation.



Important Notice:
To replace bulb(s), power may be conveniently removed by pulling the *FASS* switch down on the Dimmer or any Companion Dimmer. **For any procedure, other than routine lamp replacement, power must be turned OFF at the main electrical panel.**

Minimum Load Chart*

Single-Pole	40 W / VA
One Dimmer and one Companion Dimmer	60 W / VA
One Dimmer and two Companion Dimmers	80 W / VA
One Dimmer and three Companion Dimmers	100 W / VA
One Dimmer and four Companion Dimmers	135 W / VA

* *Vierti* Dimmers and Companion Dimmers have minimum load requirements. Do not use where the total lamp wattage is less than the minimum load shown in the chart.

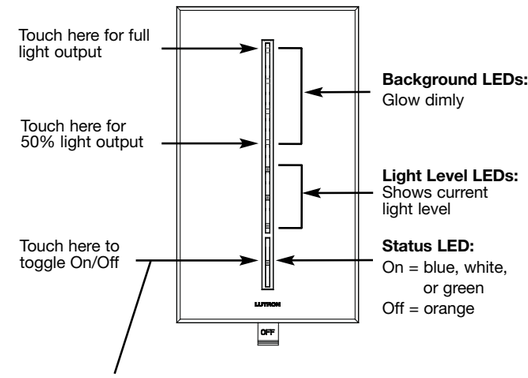
Worldwide Technical and Sales Assistance

For questions concerning the installation or operation of these products, call the ***Lutron Technical Support Center.*** Please provide the exact model number when calling.
1.800.523.9466 (U.S.A., Canada, and the Caribbean)
Other Countries call +1.610.282.3800
Fax +1.610.282.6311
Visit our web site at www.lutron.com

Limited Warranty

(Valid only in U.S.A., Canada, Puerto Rico, and the Caribbean.)
Lutron will, at its option, repair or replace any unit that is defective in materials or manufacture within one year after purchase. For warranty service, return unit to place of purchase or mail to Lutron at 7200 Suter Rd., Coopersburg, PA 18036-1299, postage pre-paid.
THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES, AND THE IMPLIED WARRANTY OF MERCHANTABILITY IS LIMITED TO ONE YEAR FROM PURCHASE. THIS WARRANTY DOES NOT COVER THE COST OF INSTALLATION, REMOVAL OR REINSTALLATION, OR DAMAGE RESULTING FROM MISUSE, ABUSE, OR DAMAGE FROM IMPROPER WIRING OR INSTALLATION. THIS WARRANTY DOES NOT COVER INCIDENTAL OR CONSEQUENTIAL DAMAGES. LUTRON'S LIABILITY ON ANY CLAIM FOR DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE MANUFACTURE, SALE, INSTALLATION, DELIVERY, OR USE OF THE UNIT SHALL NEVER EXCEED THE PURCHASE PRICE OF THE UNIT.
This warranty gives you specific legal rights, and you may have other rights, which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitation on how long an implied warranty may last, so the above limitations may not apply to you.
This product is covered under one or more of the following U.S. patents: 5,017,837; 5,248,919; 6,169,377; 7,190,125; D563,901; D570,299 and corresponding foreign patents. U.S. and foreign patents pending. Lutron and Vierti are registered trademarks and FASS is a trademark of Lutron Electronics Co., Inc. Sylvania is a registered trademark of Osram Sylvania, Inc. PHILIPS is a registered trademark of PHILIPS EXPORT B.V. CORPORATION. NEC is a registered trademark of the National Fire Protection Association, Quincy, Massachusetts.

Dimmer Functions



Touch and hold when the unit is on: Each time the dimmer is turned off, delayed fade to Off can be activated. As this region is held, an LED will begin to flash, and the lights will begin to fade off with a 30 second delay.

Advanced Programming Mode

The following *Vierti* Dimmer settings can be modified using the Advanced Programming Mode:
High/Low End Trims
LED Brightness
Sound OFF/ON
Delayed Fade Wait Time
OFF Fade Time
On Fade Time
Locked Preset

Consult Application Note #205 on how to use the Advanced Programming Mode. Please visit www.lutron.com/vierti or call *Lutron* Technical Support.

Troubleshooting

Symptom	Possible Cause
Light does not turn On and no LEDs turn On.	• The *FASS* switch on the Dimmer or Companion Dimmer(s) is pulled down to the Off position. • Light bulb(s) burned out. • Breaker is OFF or tripped. • Dimmer is miswired. Check wiring.
Light turns On and Dimmer works, but Companion Dimmer does not work.	• Wire connected to the blue screw terminal on the Dimmer is not the same wire connected to the blue screw terminal on the Companion Dimmer. Check wiring.
System repeatedly turns On and Off.	• Load is less than the minimum load. See the Minimum Load Chart to determine the acceptable minimum load.
LEDs scroll up and down.	• Dimmer has encountered an error condition. ***Call Lutron Technical Support.***
Dimmer does not have a blue screw.	• Dimmer is a single-pole unit. Replace VT-600 with VT-600M.