
VENUE™

by **PROLINE**

CONTROL 16

16 CHANNEL DMX CONTROLLER

OWNER'S MANUAL



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BEFORE YOU BEGIN

WHAT IS INCLUDED

- Control16
- Power Cord
- Owner's Manual

UNPACKING INSTRUCTIONS

Carefully unpack the product immediately and check the container to make sure all the parts are in the package and are in good condition.





Claims

If the box or the contents (the product and included accessories) appear damaged from shipping, or show signs of mishandling, notify the carrier immediately, not Venue by Proline. Failure to report damage to the carrier immediately may invalidate your claim. In addition, keep the box and contents for inspection. For other issues, such as missing components or parts, damage not related to shipping, or concealed damage, file a claim with Venue by Proline within 7 days of delivery.

TEXT CONVENTIONS

CONVENTION	MEANING
1-512	A range of values
50/60	A set of values of which only one can be chosen
Settings	A menu option not to be modified
MENU > Settings	A sequence of menu options to be followed
<ENTER>	A key to be pressed on the product's control panel
ON	A value to be entered or selected

SYMBOLS

SYMBOL	MEANING
	Electrical warning. Not following these instructions may cause electrical damage to the product, accessories, or the user.
	Critical installation, configuration, or operation information. Not following these instructions may make the product not work, cause damage to the product, or cause harm to the operator.
	Important installation or configuration information. The product may not function correctly if this information is not used.
	Useful information.

SAFETY INSTRUCTIONS

Please read the following Safety Notes carefully before working with the Control16. The Notes include important safety information about installation, usage, and maintenance.



- Always connect the Control16 to a grounded circuit to avoid the risk of electrocution.
- Always disconnect the Control16 from the power source before cleaning or replacing the fuse.
- Make sure the power cord is not crimped or damaged.
- Never disconnect the Control16 from power cord by pulling or tugging on the cord.
- Make sure there are no flammable materials close to the Control16 when operating.



- The Control16 is not intended for permanent installation.
- Always make sure that the voltage of the outlet to which you are connecting the Control16 is within the range stated on the decal or rear panel of the Control16.
- The Control16 is for indoor use only! To prevent risk of fire or shock, do not expose the Control16 to rain or moisture.
- Always install the Control16 in a location with adequate ventilation, at least 20 in (50 cm) from adjacent surfaces.
- Never connect the Control16 to a dimmer.
- Never carry the Control16 from the power cord.
- The maximum ambient temperature (Ta) is 104 °F (40 °C). Do not operate the Control16 at higher temperatures.
- In the event of a serious operating problem, stop using the Control16 immediately.
- Never try to repair the Control16. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center.
- To eliminate unnecessary wear and improve its lifespan, during periods of non-use completely disconnect the Control16 from power via breaker or by unplugging it.



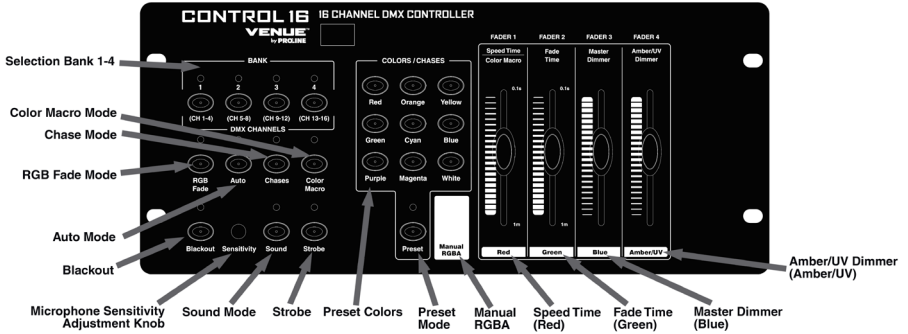
- Keep this User Manual for future use. If you sell the product to someone else, be sure that they also receive this document.

INTRODUCTION

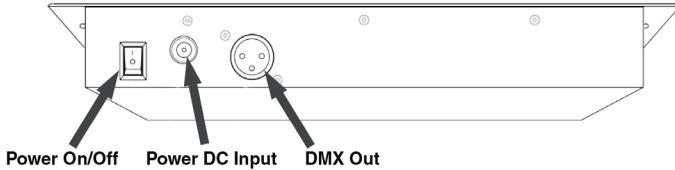
PRODUCT FEATURES

- Compact DMX-512 controller for LED fixtures (up to 4-channels)
 - Channel 1: red
 - Channel 2: green
 - Channel 3: blue
 - Channel 4: amber, white, UV (differs by 4-CH lighting fixture)
- Controls up to 4 separate fixtures
- Each fixture can be in different playback modes simultaneously
- Playback options include automated, sound-activated or manual RGBA
- Playback modes:
 - Preset: 9 built-in colors
 - Chases: manually trigger automated programs
 - Color macro: manually scroll through the color spectrum
 - RGB fade: automatically scroll through the color spectrum
 - RGB fade delay: automatically scroll through the color spectrum with a small delay to each fixture
 - Auto: randomly selects different colors for each fixture
- Variable fade times for all playback modes
- Variable strobing on the fly (2 Hz – 33 Hz)
- Adjustable blackout allows fixtures to fade in and out
- Adjustable audio sensitivity

PRODUCT OVERVIEW



Back Panel



SETUP

AC POWER

This fixture runs on 12 VDC, 500 mA. Before powering on the unit, check the output of the power supply to be sure that it is correct. To determine the product's power requirements (circuit breaker, power outlet, and wiring), use the current value listed on the product's back panel, or refer to the product's specifications chart. The listed current rating indicates the product's average current draw under normal conditions.



Always connect the Control16 to a protected circuit (circuit breaker or fuse). Make sure the product has an appropriate electrical ground to avoid the risk of electrocution or fire.

To eliminate unnecessary wear and improve its lifespan, during periods of non-use completely disconnect the Control16 from power via breaker or by unplugging it.



Never connect the Control16 to a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel serves only as a 0 to 100% switch.

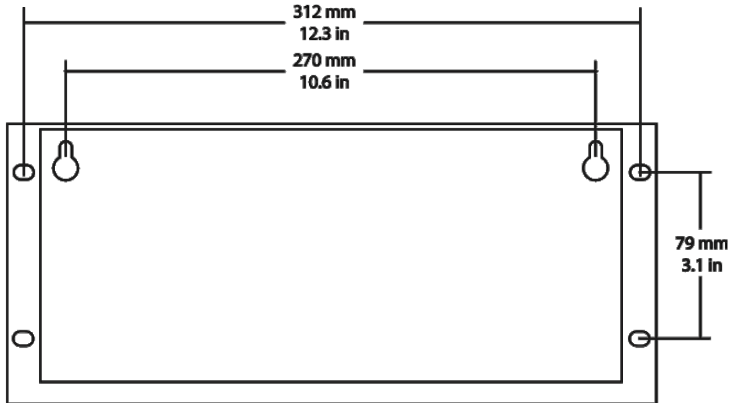
MOUNTING

Orientation

The Control16 may be mounted in any safe position.

Installation

Please see the drawing below, which shows the back of the controller. It details the dimensions for mounting. This will aid in placing the holes for installation.



FIXTURE ADDRESSING

The Control16 can control up to 4 separate banks. Each bank must be set to predetermined DMX addresses. Please see the chart below for the DMX starting addresses of each of the four <BANKS>.

BANKS	DMX STARTING ADDRESS
Bank 1	1
Bank 2	5
Bank 3	9
Bank 4	13

OPERATING INSTRUCTIONS



Please note: the amber/white/UV fader 4 works independently of the current operating mode. Only blackout will effect on this channel.

PRESET OPERATION

This controller has preset colors. There are nine preset colors to choose from, which may be accessed using the nine preset buttons. Please see the instructions below for this operation.

1. Select one or more **<BANKS>**.
2. Press **<PRESET>** until the appropriate LED indicator lights.
3. Adjust the **<FADE TIME>** to the desired level to set the Fade Time.
4. Adjust the **<MASTER DIMMER>** to the desired level to set the intensity.
5. **<AMBER/UV DIMMER>** may be adjusted; however, it will not be affected by this mode.
6. Select one of the nine **<PRESET COLOR>** buttons.



Please be sure that the Strobe or Blackout functions are not overriding the controls.



Sound will not function in Preset Mode.

RGB FADE OPERATION

This controller has a preset color fading program, which will fade all units in unison between colors. Please see the instructions below for this operation.

1. Select one or more **<BANKS>**.
2. Press **<RGB FADE>** until the appropriate LED indicator lights.
3. Adjust the **<SPEED TIME>** to the desired level to set the speed time.
4. Adjust the **<FADE TIME>** to the desired level to set the fade time.
5. Adjust the **<MASTER DIMMER>** to the desired level to set the intensity.
6. **<AMBER/UV DIMMER>** may be adjusted; however, it will not be affected by this mode.



Please be sure that the Strobe & Blackout functions are not overriding the controls.



Sound will function in RGB Fade Mode.

AUTO OPERATION

This controller has built-in automatic programs, which will change each unit independently, between random colors. Please see the instructions below for this operation.

1. Select one or more **<BANKS>**.
2. Press **<AUTO>** until the appropriate LED indicator lights.
3. Adjust the **<SPEED TIME>** to the desired level to set the speed time.
4. Adjust the **<FADE TIME>** to the desired level to set the fade time.
5. Adjust the **<MASTER DIMMER>** to the desired level to set the intensity.
6. **<AMBER/UV DIMMER>** may be adjusted; however, it will not be affected by this mode.



Please be sure that the Strobe & Blackout functions are not overriding the controls.



The fixtures in this mode will not be the same color. Each fixture will operate on a random color.



Sound will function in Auto Mode.

CHASE OPERATION

This controller has preset color chases. There are several color combinations to choose from. Please see the instructions below for this operation.

1. Select one or more **<BANKS>**.
2. Press **<CHASES>** until the appropriate LED indicator lights.
3. Use the **<PRESET COLORS>** to select a chase. See the chart below for a description on which button triggers which chase.
4. Adjust the **<SPEED TIME>** to the desired level to set the speed time.
5. Adjust the **<FADE TIME>** to the desired level to set the fade time.
6. Adjust the **<MASTER DIMMER>** to the desired level to set the intensity.
7. **<AMBER/UV DIMMER>** may be adjusted; however, it will not be affected by this mode.

CHASE SELECTION

Use the following **<PRESET COLORS>** to select the corresponding chase.

Red:	Red/Green
Orange:	Green/Blue
Yellow:	Red/Blue
Green:	Red/Cyan
Cyan:	Green/Magenta
Blue:	Yellow/Blue
Purple:	White/Blackout
Magenta:	Color Cycle
White:	Yellow/Magenta



Please be sure that the Strobe & Blackout functions are not overriding the controls.



Sound will function in Chase Mode.

RGB OFFSET OPERATION

This controller has a built-in color fade program that will chase between fixtures sequentially: 1–4, continuously. Please see the instructions below for this operation.

1. Press **<RGB FADE>** & **<AUTO>** simultaneously.
2. Adjust the **<SPEED TIME>** to the desired level to set the speed time.
3. Adjust the **<FADE TIME>** to the desired level to set the fade time.
4. Adjust the **<MASTER DIMMER>** to the desired level to set the intensity.
5. **<AMBER/UV DIMMER>** may be adjusted; however, it will not be affected by this mode.



Sound will function in RGB Offset Mode.



Please be sure that the Strobe & Blackout functions are not overriding the controls.

COLOR MACRO OPERATION

This controller has preset color macros, some with different intensities. Please see the instructions below for this operation.

1. Select one or more **<BANKS>**.
2. Press **<COLOR MACRO>** until the appropriate LED indicator lights.
3. Move the **<SPEED TIME>** fader to select the color.
4. Adjust the **<FADE TIME>** to the desired level to set the fade time.
5. Adjust the **<MASTER DIMMER>** to the desired level to set the intensity.
6. Adjust the **<AMBER/UV DIMMER>** to the desired level to set the white intensity.



This mode applies the same color to all fixtures.



Sound will NOT function in Color Macro Mode.

SOUND-OVERRIDE

The modes in this controller that have multiple steps are normally triggered using the <SPEED TIME> fader. However, they can be triggered using the built-in microphone, as well.

Sound-Override mode will **ONLY** work in one of the following modes:

- **RGB Fade**
- **AUTO**
- **CHASES**

Please see the following steps for operation.

1. Press <SOUND> until the LED indicator lights.
2. Adjust the sound sensitivity by rotating the <MICROPHONE SENSITIVITY ADJUSTMENT KNOB>.

FADER #4 AMBER / WHITE / UV

The <FADER #4> fader on this controller operates independently of Faders #1-3 in the Bank, regardless of the active operating mode.

The only functions that effect the White/Amber/UV color are <BLACKOUT> and <STROBE>.

STROBE-OVERRIDE

One of the functions for the <SPEED TIME> fader is the strobe-override function. It will work in all operating modes. Please see the instructions below for this operation:

1. Select one or more <FIXTURES>.
2. See note below about RGBA Operation.
3. Press <STROBE> until the appropriate LED indicator lights.
4. Adjust <SPEED TIME> to the desired level.
5. In order to return to the desired mode, press <STROBE> until the appropriate LED indicator is off.



In order to deactivate this function for a single fixture, <STROBE> must be activated, and <FADE TIME> must be set to 0.1M (fully down). Then, deactivate <STROBE> (the LED indicator will turn OFF).



Strobe-Override will only affect fixtures that are selected.



Double-tap <STROBE> at any time to deactivate strobing for all fixtures!



If the fixture is in RGBA Operation, the faders must be adjusted above 0% in order for the strobe to function.

BLACKOUT

This controller has a dedicated blackout button. This button works in conjunction with the <FADE TIME> fader. Please see the instructions below for this operation.

1. Select one or more <BANKS>.
2. Adjust the <FADE TIME> fader to the desired value to determine how quickly the lights will fade out.
3. Press <BLACKOUT> until the appropriate LED indicator lights.



The blackout function will also work with the <FADE TIME> fader when disabling the blackout.



The fading blackout function will not work when the controller is in Manual RGBA mode.



Double-tap <BLACKOUT> to instantly blackout all fixtures, regardless of what is selected, according to the <FADE TIME> value.

MANUAL RGBA MODE

This controller has the ability to manually choose a custom color combination by simply using the Red, Green Blue, and Amber faders. However, <MANUAL RGBA> must first be pressed. Please see the instructions below for this operation.

1. Select one or more <BANKS>.
2. Press <MANUAL RGBA> until the appropriate LED indicator lights.
3. Adjust the Red, Green, Blue, and Amber faders to the desired levels.



Blackout dimming speed will not work in Manual RGBA mode. When <BLACKOUT> is pressed, the lights selected will immediately turn off.



Speed/Fade Time will not work in Manual RGBA mode.

SUMMARY OF FADER FUNCTIONS

Mode	Fader 1	Fader 2	Fader 3	Fader 4
Manual RGB	Red Dimmer	Green Dimmer	Blue Dimmer	Amber/UV Dimmer
Preset	n/a	Fade Time	Master Dimmer	Amber/UV Dimmer
Color Macro	Color Macro	Fade Time	Master Dimmer	Amber/UV Dimmer
Chase	Speed Time	Fade Time	Master Dimmer	Amber/UV Dimmer
Auto	Speed Time	Fade Time	Master Dimmer	Amber/UV Dimmer
RGB Fade	Speed Time	Fade Time	Master Dimmer	Amber/UV Dimmer

Set Tri-Color fixtures to DMX 3CH Mode

Set Quad-Color fixtures to DMC 4CH Mode

APPENDIX

DMX PRIMER

A DMX connection is made up of 512 channels and those channels may be assigned in any manner. DMX receiving fixtures need one or more sequential channels. The user must assign a starting address on the fixture that indicates the first channel reserved in the controller.

Different DMX controllable fixtures can differ in the total number of channels required. Try to plan your start address ahead of time to avoid overlap of channels. If they do, this will result in erratic operation. If your intention is to have multiple fixtures move in unison or operation, use the same starting address for each.

DMX fixtures receive data through a serial Daisy Chain. This is where the DATA OUT of one fixture connects to the DATA IN of the next. The order in which the fixtures are connected is not important and has no effect on how a controller communicates to each fixture. To connect fixtures, use shielded two-conductor twisted pair cable (with three pin XLR male to female connectors). Pin 1 = shield connection. Pin 2 = Data Negative (S-). Pin 3 = Data positive (S+).

GENERAL TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE(S)	POSSIBLE ACTION(S)
Breaker/Fuse keeps blowing	<ul style="list-style-type: none"> Excessive circuit load Short circuit along the power wires 	<ul style="list-style-type: none"> Check total load placed on the electrical circuit. Check for a short in the electrical wiring (internal and/or external).
Device does not power up	<ul style="list-style-type: none"> No power Loose power cord 	<ul style="list-style-type: none"> Check for power on Mains. Check power cord
Fixture is not responding to DMX	<ul style="list-style-type: none"> Wrong DMX addressing Damaged DMX cables Wrong polarity settings on the controller Loose DMX cables Faulty DMX interface Faulty Main PCB 	<ul style="list-style-type: none"> Check Control Panel and unit addressing Check DMX cables Check polarity switch settings on the controller Check cable connections Replace DMX input Replace Main PCB
Breaker/Fuse keeps blowing	<ul style="list-style-type: none"> Non DMX cables Bouncing signals Long cable / Low level signal Too many fixtures Interference from AC wires 	<ul style="list-style-type: none"> Use only DMX compatible cables Install terminator as suggested. Install amplifier right after fixture with strong signal. Install an optically coupled DMX splitter after unit #32. Keep DMX cables separated from power cables or black lights.



If you still have a problem after trying the above solutions, please contact Technical Support.

FIXTURE LINKING

You will need a serial data link to run light shows of one or more fixtures using a DMX controller or to run synchronized shows on two or more fixtures set to a master/slave operating mode. The combined number of channels required by all the fixtures on a serial data link determines the number of fixtures the data link can support.



Fixtures on a serial data link must be daisy chained in one single line. To comply with the EIA-485 standard, no more than 32 fixtures should be connected on one data link. Connecting more than 32 fixtures on one serial data link without the use of a DMX optically-isolated splitter may result in deterioration of the digital DMX signal.

Maximum recommended serial data link distance: 500 m (1640 ft)
Maximum recommended number of fixtures on a serial data link: 32

DATA CABLING

To link fixtures together you must obtain data cables. You can purchase DMX cables directly from a dealer/distributor or construct your own cable. If you choose to create your own cable please use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

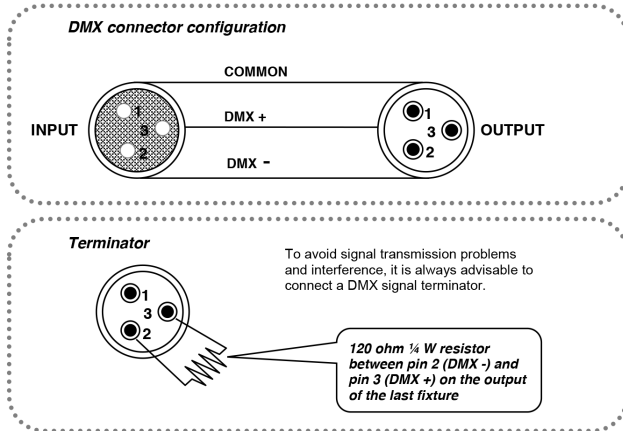
DMX Data Cable

Use a Belden© 9841 or equivalent cable which meets the specifications for EIA RS-485 applications. Standard microphone cables cannot transmit DMX data reliably over long distances. The cable must have the following characteristics:

Type:	shielded, 2-conductor twisted pair
Maximum capacitance between conductors:	30 pF/ft
Maximum capacitance between conductor and shield:	55 pF/ft
Maximum resistance:	20 ohms/1000 ft
Nominal impedance:	100–140 ohms

CABLE CONNECTORS

Cabling must have a male XLR connector on one end and a female XLR connector on the other end.



Do not allow contact between the common and the fixture's chassis ground. Grounding the common can cause a ground loop, and your fixture may perform erratically. Test cables with an ohm meter to verify correct polarity and to make sure the pins are not grounded or shorted to the shield or each other.

SETTING THE STARTING ADDRESS

This DMX mode enables the use of a universal DMX controller device. Each fixture requires a start address from 1–512. A fixture requiring one or more channels for control begins to read the data on the channel indicated by the start address. For example, a fixture that uses six DMX channels and was addressed to start on DMX channel 100, would read data from channels: 100, 101, 102, 103, 104, and 105. Choose start addresses so that the channels used do not overlap, and note the start address selected for future reference.

If this is your first time addressing a fixture using the DMX control protocol, we suggest jumping to the “Appendix” section and reading the heading “DMX Primer”. It contains very useful information that will help you understand its use.

3-PIN TO 5-PIN CONVERSION CHART

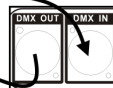
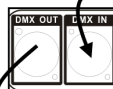
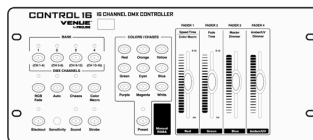


If you use a controller with a 5-pin DMX output connector, you will need to use a 5-pin to 3-pin adapter. The chart below details a proper cable conversion:

3-PIN TO 5-PIN CONVERSION CHART		
Conductor	3-Pin Female (Output)	5-Pin Male (Input)
Ground-Shield	Pin 1	Pin 1
Data (-) signal	Pin 2	Pin 2
Data (+) signal	Pin 3	Pin 3
Not used		Pin 4
Not used		Pin 5

SETTING UP A DMX SERIAL DATA LINK

1. Connect the (male) 3-pin connector side of the DMX cable to the output (female) 3-pin connector of the controller.
2. Connect the end of the cable coming from the controller which will have a (female) 3-pin connector to the input connector of the next fixture consisting of a (male) 3-pin connector.
3. Then, proceed to connect from the output as stated above to the input of the following fixture and so on.



Continue the link

MAINTENANCE

PRODUCT MAINTENANCE

To maintain optimum performance and minimize wear, fixtures should be cleaned frequently. Usage and environment are contributing factors in determining frequency. As a general rule, fixtures should be cleaned at least twice a month. Dust build up reduces light output performance and can cause overheating. This can lead to reduced lamp life and increased mechanical wear. Be sure to power off fixture before conducting maintenance.

1. Unplug fixture from power.
2. Use a vacuum or air compressor and a soft brush to remove dust collected on external vents.
3. After the product has reached room temperature, clean all glass with a mild solution of glass cleaner or Isopropyl Alcohol and a soft lint free cotton cloth or lens tissue.
4. Apply solution to the cloth or tissue and drag dirt and grime to the outside of the lens.
5. Gently polish optical surfaces until they are free of haze and lint.



Always dry the parts carefully after cleaning them.

TECHNICAL SPECIFICATIONS

WEIGHT & DIMENSIONS	
Length	12.8 in (325 mm)
Width	5.5 in (140 mm)
Height	2.1 in (52 mm)
Weight	3 lb (1.4 kg)
POWER	
Operating Range	DC 12 V, 500 mA max
Adapter	Provided
INDOOR / OUTDOOR	
Rating	For indoor use only
THERMAL	
Maximum ambient temperature	104 °F (40 °C)
CONTROL & PROGRAMMING	
Data Output	3-pin XLR female socket
Data pin configuration	pin 1 shield, pin 2 (-), pin 3 (+)
Protocols	DMX-512 USITT
DMX control channels	001-016
ORDERING INFORMATION	
Control16	CONTROL16
WARRANTY INFORMATION	
Warranty	1-year limited warranty

CUSTOMER SUPPORT



**MISSING
—OR—
DAMAGED
PARTS?**

HAVE QUESTIONS?

**CALL
855-229-9665
TOLL FREE**

**—HAVE—
ASSEMBLY
QUESTIONS?**

WARRANTY

One (1) Year Limited Warranty

Subject to the limitations set forth below, Venue by Proline™ hereby represents and warrants that the components of this product shall be free from defects in workmanship and materials, including implied warranties of merchantability or fitness for a particular purpose, subject to normal use and service, for one (1) year [ninety (90) days on lamps] to the original owner from the date of purchase.

Retailer and manufacturer shall not be liable for damages based upon inconvenience, loss of use of product, loss of time, interrupted operation or commercial loss or any other incidental or consequential damages including but not limited to lost profits, downtime, goodwill, damage to or replacement of equipment and property, and any costs of recovering, re-programming, or reproducing any program or data stored in equipment that is used with Venue by Proline™ products. This guarantee gives you specific legal rights. You may have other legal rights which vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

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