12 VOLT DC WIRE STANDARD EST. 1-2017

Because many Keystone RV owners are already do-it-yourselfers fortheir homes, cars and boats, Keystone has made it easier for our owners to put their DIY skills to work on their RV, saving both time and money. Following is a guide to Keystone's exclusive color-coded 12V Wiring Standard. Since January 2017, every Keystone, Dutchmen and CrossRoads unit has been built to this standard which makes it simple to locate and trace wiring for the RV's electrical and entertainment systems. TURN If you choose to work on your RV's electrical systems, PLEASE USE CAUTION AND GOOD COMMON SENSE. ALWAYS DISCONNECT THE 120V POWER CORD, AND OFF THE GENERATOR (if applicable). Your comfort and your safety working with the 12 Volt Wiring Standard are very important to us. If at any time you're uncomfortable or realize you don't have the necessary experience to independently work with the 12V wiring system, please stop what you're doing immediately. Either seek the advice of someone familiar with RV 12V electrical systems AND Keystone's 12 Volt Wire Standard, or contact your authorized Keystone dealership or Keystone directly. It is important to note, the information outlined and discussed in the 12 Volt Wiring Standard is in no way related, nor does it apply, to the 120 Volt system of your recreational vehicle. If you are unsure of the difference between 12 Volt and 120 Volt wiring and 120 Volt appliances and/or receptacles, do not attempt any DIY methods, contact your authorized Keystone dealership.

ANY ELECTRICAL FAULT CAN BE ISOLATED TO A CIRCUIT IN A MATTER OF MINUTES BY USING THIS 12V WIRE STANDARD, A VOM METER (MULTI-METER) AND STARTING AT THE SOURCE. WITH FEW EXCEPTIONS, THERE ARE TWO POSSIBLE 12V POWER SOURCES:

12V DC PANEL

Typically lower and more stable amperage draw components (interior lights, appliances, fans, etc.)

Wiring sequence of color-coded and numbered wire:

1. DC Panel -> Switch -> Component
2. DC Panel -> iN-Command Body Control Module (control board)
-> Switch -> Component

12V BATTERY

Typically higher and more variable amperage draw components (slide motors, leveling jacks, etc.)

Wiring Sequence of color-coded and numbered wires:

1. Battery -> Auto Resettable Circuit Breaker -> Switch -> Component
2. Battery -> iN-Command Body Control Module (control board)-> Switch -> Component

Imporntant Notes:

12V Distribution (DC) Labeled, Color-coded & Numbered.

Auto resettable breakers are typically within 18" of the battery. Some components may not be on a switch.

Some Vendor installed components contain a fuse.

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1. POWER FEEDS & 7-WAY TRAILER CONNECTION

- The power feeds do not contain numbers. These are used to provide a single source of power to a junction or switch panel.
- Any battery connections (-) or chassis ground will be BLACK, in some cases a white wire will also be a chassis ground (an inverter, for example) but will never be a direct connection to the battery.
- 7-Way Trailer Connection matches with the industry standard.

(+) 12 VDC Positive Conductor	RED	4/0, 2/0, 1/0, 2 , 4 , 6 , 8 , 10 , 14	Positive Battery Mains
(-) 12 VDC Negative Conductor Return	BLACK	4/0, 2/0, 1/0, 2 , 4 , 6 , 8 , 10 , 14	Negative Battery Mains
(+) 12 VDC Electric Slide-Out Power	PURPLE	10	Electric Slide-Out Feed
(+) 12 VDC Power Awning	YELLOW	10	Electric Awning Feed
(+) 12 VDC Interior Lighting	GREEN	10	Interior Lighting Feed
(+) 12 VDC Awning Light	ORANGE	14	Awning Light Feed
(+) 12 VDC Electric Jack Power	BROWN	10	Electric Jack/Power Tongue Jack Feed
(-) 12 VDC Negative Conductor Return	WHITE	10, 14	Negative
Marker, Tail, & License Lights	GREEN	16	Green/White Ripcord
Left Stop & Turn	RED	16	
Right Stop & Turn	BROWN	16	
Electric Brake	BLUE	Various Use Existing	12 = Tri-Axles, 14 = Tandem (minimum)
Common Ground	WHITE	10	
Battery Charge	BLACK	10	
Center Auxiliary	YELLOW	16	

2. LOW CURRENT REMOTE SIGNAL WIRES (SINGLE CONDUCTOR)

- The following Colored and Numbered signal wires are used for remote or relay control input signal wires. The Color/Number will correspond with the power circuit Color/Number for the being controlled. Numbers are repeated down the entire length of the wire.

Interior Lighting Circuit Signals	# GREEN/# #	16 - 1, 2, 3, 4, 5, 6, 7, 8	Control Circuit - # will correspond with circuit # (*Note: Single Conductor)*
Awning/Exterior Light(s) Circuit Signals	# ORANGE/# #	16 - 1, 2, 3, 4, 5	Control Circuit - # will correspond with circuit # (*Note: Single Conductor*)
Relay/Signal	# PINK/# #	16 - 1, 2, 3, 4	Control Circuit- #1 = Inverter Signal (Remote ON/OFF), #2 = Fresh Tank Heater Signal, #3 = Grey Tank/Holding Tank Heater Signal, #4 = Black Tank Heater Signal
RGB Lighting Circuit Signals	# GREEN/WHITE STRIPE/# #	16 - 1, 2, 3, 4	Control Circuit - # will correspond with circuit # (*Note: Single Conductor*)
Battery Heat	RED/WHITE STRIPE	14	Battery Heat Signal (*Note: Single Conductor)*

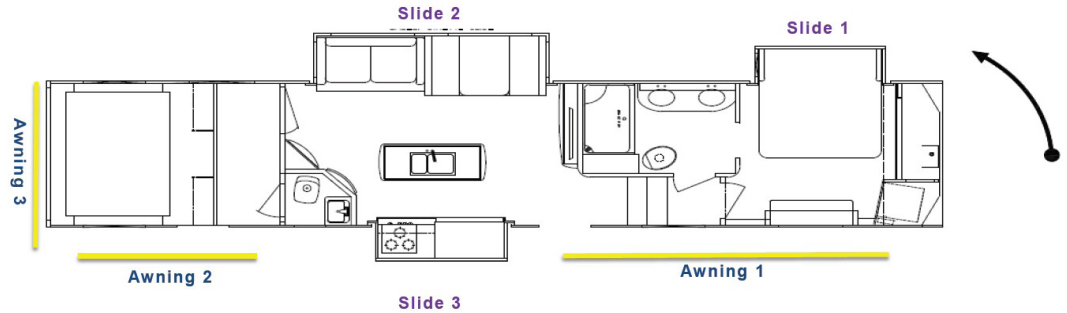
3. TANKS, WATER HEATER, & GENERATOR

- Tank - 5-Wire Ribbon; a 3rd Gray Tank, a 2nd Black Tank, or a 2nd Fresh Tank use single-conductor LIGHT BLUE numbered wires.
- Water Heater - 4-Wire Ribbon
- Generator - 5-Wire Harness (OEM supplied)

Gray Tank #2 Fresh Tank #1 Gray Tank #1 Tank Level Ground Black Tank #1	BONDED RIBBON RED BLUE GRAY WHITE BROWN	18	Gray Tank #2 Sensor Signal Fresh Tank #1 Sensor Signal Gray Tank #1 Sensor Signal Tank Level GND Return Path Black Tank #1 Sensor Signal
Additional Tank Signal(s)	# # LT BLUE #	18 - 1, 2, 3	1 = Gray Tank #3 2 = Black Tank #2 *(Note: Single Conduction)* 3 = Fresh Tank #2
Water Heater GND Water Heater Gas Signal Water Heater Electric Signal Water Heater Fault Signal	BONDED RIBBON WHITE BROWN ORANGE PINK	18	Water Heater
Generator Start Generator Prime/Stop Generator Service Generator Hours Generator GND	ONAN HARNESS RED GREEN BLUE ORANGE BROWN	OEM Harness, Come in various Lengths.	Generator Start Signal Generator Prime/Stop Signal Generator Status Lamp Signal Generator Hours Signal Generator Control GND

4. ELECTRIC SLIDES AND POWER AWNINGS

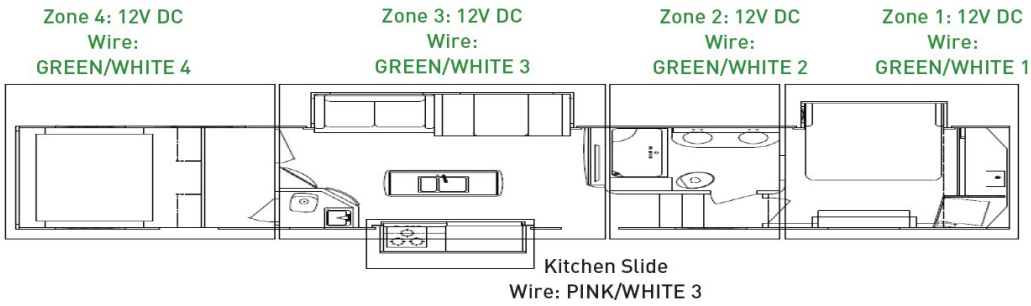
- Electric slides are numbered #1-#5 starting at the hitch and going counter-clockwise around the trailer with ODS Front #1.
- Hydraulic slides are not counted.
- Power awnings are numbered #1-#3 from front to back.



Electric Slide-Out	(+) # # PURPLE #/WHITE (-)	10, 16 - 1,2,3,4,5,6	#1 = First Slide, #2 = Second Slide, #3 = Third Slide, #4 = Fourth Slide, #5 = Fifth Slide (Order: Front ODS to Rear ODS, Rear DS to Front DS)
Electric Awning	(+) # # YELLOW #/WHITE (-)	12, 16 - 1,2,3	#1 = First Awning, #2 = Second Awning, #3 = Third Awning (Order: Front to Back, Rear)

5. 12 VDC TRAILER "ZONE" ORGANIZATION

- Interior Lights are organized in a minimum of two and maximum of four Dedicated Zones numbered #1-#4 for 12 VDC power.
- The following Color Groupings are numbered per Circuit. The positvive Conductor (Colored Conductor) will indicate the circuit number for the group. Numbers are repeated down the entire length of the wire. The numbers correspond to the items on that circuit.
- Pink/White #3 is ALWAYS used for the kitchen slide.



(+) 12 VDC Red Green Blue	RGB LIGHTS # # WHITE RED GREEN BLUE	14, 16 14, 16 14, 16 14, 16 — 1, 2, 3 ,4	RGB (Red, Green, Blue) LED Lights - Bonded/Bundled or Jacketed (#'s may be on jacket or bundle)
Interior Lighting Circuits	(+) (-) # # GREEN/WHITE w/#	10 - 1 14, 16 - 1, 2, 3, 4, 5, 6, 7, 8	12 VDC Interior Lights - #5, 6, 7, 8 Remote Lighting Circuits
12 VDC Accessory Circuits	(+) (-) # # PINK/WHITE w/#	8, 10 - 1 12, 14 - 2, 3, 4 10, 14 - 5	Pink #1 = 12 VDC Refrigerator Pink #2 = Furnace Pink #3 = Kitchen Slide Pink #4 = Accessory Power, Power Vent Fans / TV Booster / USB Charging Stations / Range Fan / Radio Power / CO Alarm / HVAC Controls / 12 VDC TV(S) / ETC Pink #5 = Stereo/Amplifier (High Current Applications)
Holding Tank Heaters	(+) (-) # # TAN/WHITE w/#	10 - 1, 2, 3, 4	Tan # 1 = Power Feed To Switch Tan # 2 = Fresh Tank Tan # 3 = Gray Tank(s) Tan # 4 = Black Tank(s)
Bed Lift Circuits	(+) (-) # # DK GREEN/WHITE w/#	10 - 1, 2	12 VDC Bed Lift/Tilt/Fold Systems/Happy Jacks
Solar PV Charge Circuit #1	(+) (-) 1 1 GREEN 1/BLACK	8, 10	Solar PV Charge Circuit #1 (Roof Dock Port #1) - 10 AWG =15-50 MPPT Charge Controllers, 10A PWM Charge Controllers, 8 AWG = 15A - 30A PWM Charge Controllers
Solar PV Charge Circuit #2	(+) (-) 2 2 GREEN 2/BLACK	8, 10	Solar PV Charge Circuit #2 (Roof Dock Port #2) -10 AWG =15-50 MPPT Charge Controllers, 10A PWM Charge Controllers, 8 AWG = 15A - 30A PWM Charge Controllers
Solar Battery Charge Circuit #1	(+) (-) 1 1 RED 1/BLACK	6, 8, 10	Solar Battery Charge Circuit #1 (Roof Dock Port #1) Charge Controller to Battery - 10 AWG = MPPT Charge Controllers, 10A PWM Charge Controllers, 8 AWG = 15A - 30A PWM Charge Controllers, 6 AWG = 50A Charge Controllers
Solar Battery Charge Circuit #2	(+) (-) 2 2 RED 2/BLACK	6, 8, 10	Solar Battery Charge Circuit #2 (Roof Dock Port #2) Charge Controller to Battery - 10 AWG = MPPT Charge Controllers, 10A PWM Charge Controllers, 8 AWG = 15A - 30A PWM Charge Controllers, 6 AWG = 50A Charge
Solar Side Port Charge Circuit	(+) (-) 3 3 RED 3/BLACK	10	Solar Side Port Charge Circuit

6. ELECTRIC JACKS/EXTERIOR LIGHTS/HYDRAULIC PUMP & SOLENOID VALVES/FUEL SENDING UNITS/WATER PUMP/AWNING

- Awning lights are numbered #1-#3 from front to back. #1 - Is 14 ga as it may be used to supply (2) Awning lights on remote systems, #2 & #3 are 16 ga.
- Hydraulic pump - Note the Gray wire is REV & the White wire is FWD. The Trombetta is labeled REV & FWD.
- Fuel sending units - Both fuel tank sending unit suppliers use RED or PINK for signal and Black for GND.
- The following Colored and Numbered wires are specific to the Application. The Positive Conductor (Colored Conductor) will indicate the circuit number for the group. Numbers are repeated down the entire length of the wire.

Electric Stabilizer Jack(s)	(+) BROWN #/WHITE (-)	10 - 1, 2, 3 14 - 1, 2 16 - 1, 2, 3	#1 = Front Electric Jack(s), #2 = Rear Electric Jack(s), #3 = Power Shore Cord Reel
Exterior Light Circuits	(+) ORANGE #/WHITE (-)	14 - 1, 4, 5 16 - 2, 3	Switch To Awning Light Circuit 1, Switch To Awning Light Circuit 2, Switch To Awning Light Circuit 3, Porch Light/Entrance Light/Step Light/Power Channel/Scare Light(s)/Cap & Cargo Light(s)
Hydraulic 12VDC Control Circuits	(+) GRAY/WHITE (-)	16 - 1, 2, 3, 4, 5, 6	#1 Hydraulic Solenoid - Front Landing Jacks, #2 Hydraulic Pump Contactor, #3 Hydraulic Solenoid - Slide-Out(s) #1, #4 Hydraulic Solenoid - Slide-Out #2, #5 Hydraulic Solenoid - Slide-Out #3, #6 Hydraulic Solenoid - Slide-Out #4
Fuel Station Tank Level	GND RED #/BLACK Signal	14 - 1,2 10 - 4	#1 Generator Fuel Tank Sending Unit, #2 Fuel Station Tank Sending Unit, #4 Fuel Station (Pump) Power Feed
Water Pump	(+) BLUE 1/WHITE (-)	14	Water Pump Power

7. KEYSTONE TV COAX (RG6) CABLE STANDARD

Item	Color	Application
Antenna	BLACK	Signal Controller to Antenna
Bedroom TV	GRAY	Signal Controller to Bedroom TV
Main Living TV	TAN	Signal Controller to Main Living Area TV
Bedroom 2 TV / Garage TV	WHITE	Signal Controller to Bedroom 2 or Garage TV
Outside / Cargo TV	ORANGE	Signal Controller to Outside or Cargo TV
Radio (FM)/ Cable (Non-KeyTV)	PURPLE	Signal Controller to FM Radio (Outside Entrance to Booster Non-KeyTV)
Rooftop Satellite Prep/ Optional Side SAT Entrance (Non-KeyTV)	BLUE	Rooftop SAT Entrance to Signal Controller (KeyTV)or SAT Prep Wall Plate (Non-KeyTV)

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