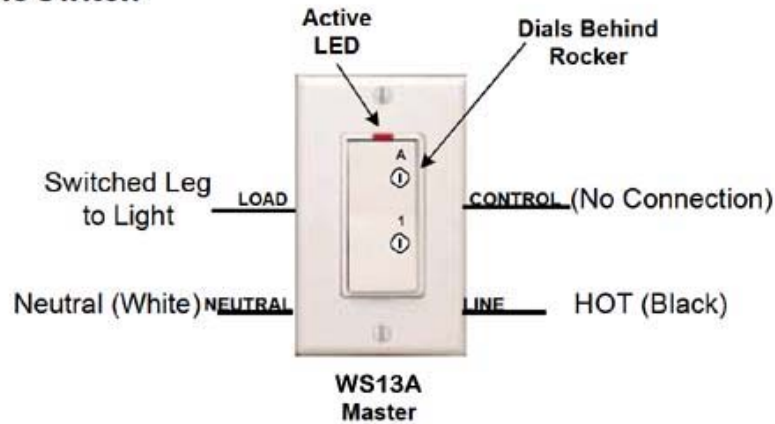


20A Wall Switch - Receiver

WS13A

Single-Pole Switch



Description: The WS13A is a mechanical, decorative-style, non-dimming, Single-Pole/3-Way wall switch rated for 20amps. It can handle ON/OFF loads as follows: Incandescent (120V Standard or Halogen) Bulbs, Low Voltage Transformers, High Wattage Flood Lights, Fluorescent Lighting, Pumps/Motors and Appliances. The Red LED Indicates its "ON/OFF" status. Its decorative paddle permits local operation of the switch. The X10 Address Code Dials set the House Code and Unit Number and are located behind the paddle.

Specific Requirements: 120VAC, 20amps
Neutral Wire IS required. Ground Wire is not used.

Optional / Supplementary Devices & Modules:

WS14A - Slave Switch is required for existing 3-Way Installations.
XPSPAL - Almond Rocker in package of 10ea. for both WS13A and WS14A.
XPT1 - Alternate Slave Switch (Transmitter) for existing and new 3-Way/4-way Installations.
XPF - Filter to reduce noise, from load, degrading switch operation.
Non-X10 Contactor - Heavy Load Relay device for High Intensity Discharge (HID) Lighting and other heavy-duty loads.

X10 Protocol:

House Code Dial - Letters A-P (default "A") **Unit Number Dial** - Numbers 1-16 (default "1")
Each X10 Receiver Module is set to a unique Unit Number or to an identical Unit Number as desired.
Each X10 Controller operating a specific set of Receiver Modules must be set to the same House (Letter) Code as the Receivers they are controlling.
Responds to ALL LIGHTS ON command

Electrical Protocol:

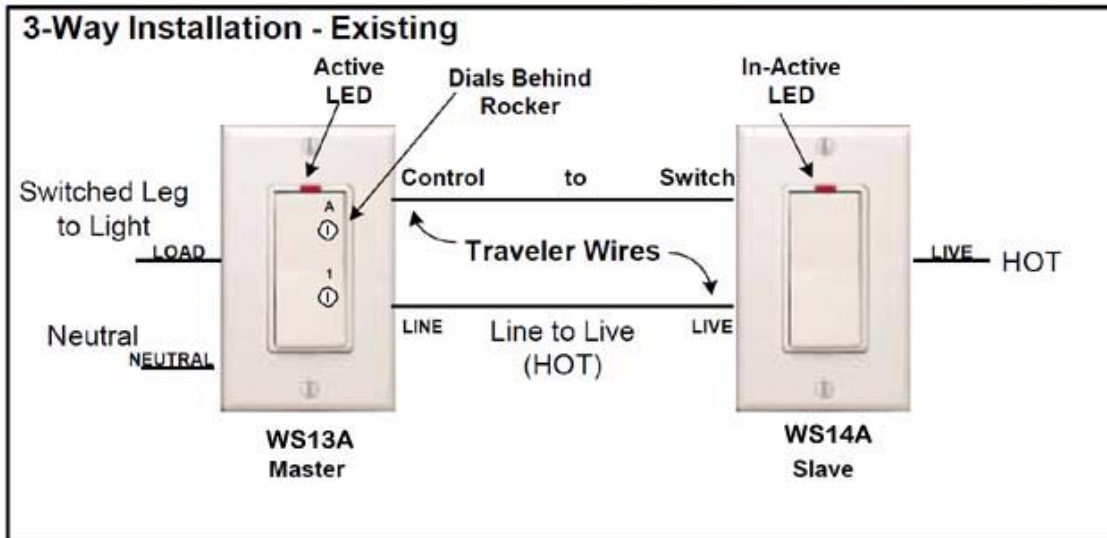
Nearly all residential homes are wired SPLIT-PHASE. Each 120V Phase is NOT directly connected with the other 120V Phase. If after installation, an X10 Receiver does not respond to a remote Controller, then check to ensure that the breaker serving the X10 Receiver is on the same phase as the Controller. If not, the breaker can be changed to the opposite phase. An alternative solution is recommended, to install a Phase Coupler for improving remote communications throughout the home.

Installation: for Single-Pole operation

1. Turn power OFF at Circuit Breaker
2. Pull-out the existing wall switch from the switch box.
3. Inspect inside the wall switch box for existence of white neutral wire(s) capped-off. If no white neutral wires exist, STOP. You CANNOT use the WS13A unless you run a neutral wire to this box.
4. Remove the existing wall switch. Two wires remain protruding out of switch box. One is HOT; the other goes to the light/load. They may be the same color.
5. With Breaker ON, determine which protruding wire is HOT. Use a voltmeter and measure between ground and each wire individually. One will read 120V, the other 0V.
6. With Breaker OFF, Connect a white neutral wire to the NEUTRAL Terminal. You may have to tap into a neutral wire bundle with an additional white wire 6-8" long.
7. Connect the HOT wire to the LINE Terminal; connect the other wire to the LOAD Terminal.
8. No connection is needed at the Control Screw Terminal.
9. Re-check all connections, Turn power ON at Circuit Breaker.
10. Press switch paddle once, you will hear the switch CLICK and the light should turn ON. Press paddle again, you will hear the switch CLICK and the light should turn OFF.
11. You are now ready to control the switch with an X10 Remote Control Module: desktop, wireless handheld, Security Panel, etc. The default address is "A1". If you wish to change the code, the Code Dials are behind the paddle. Remove the paddle with a small flat screwdriver applied to the side of the paddle at the center fulcrum point. Insert screwdriver in small gap space between switch plate and paddle and flip the paddle up from its side.
12. Mount the Switch in the wall box and attach the switch cover plate.

20A Wall Switch - Receiver

WS13A



Installation: for 3-Way operation – Existing

Note: A 3-Way system, by definition, means two existing wall switches which operate one light load (can be multiple lights if all come on together).

1. Turn power OFF at Circuit Breaker.
2. Pull-out the existing 3-way wall switches from the two switch boxes.
3. Remove the common-side wire (by itself) from the two switches. In one switch box, that single wire is HOT, in the other switch box that single wire goes to the light.
4. With Breaker ON, determine which wire is HOT. Use a voltmeter and measure between ground and each wire individually. One will read 120V, the other 0V. Turn Breaker OFF. Mark the wires as to which one is HOT and which one goes to the light.
5. The Slave Switch is installed in the switch box which has the HOT wire. The Master Switch is installed in the switch box that has the wire that goes to the light.
6. Inspect inside the wall switch box (that has the wire going to the light) for existence of white neutral wire(s) capped-off. If no white neutral wires exist, STOP. You CANNOT use the WS13A unless you run a neutral wire to this box.
7. With Breaker OFF, remove the existing two wall switches. Three wires (minimum) remain protruding out of each switch box. At the Slave switch box, one is HOT; the other two wires are the traveler wires. They may be the same color, normally they are different colors. At the Master switch box, one is the Light wire; the other two wires are the traveler wires. They may be the same color, normally they are different colors.
8. With Breaker OFF, install the Slave Switch first. HOT wire goes to LIVE (either terminal, they are a common bus), One Traveler wire also goes to LIVE; the second Traveler wire goes to SWITCH.
9. With Breaker OFF, install the Master Switch second. The One HOT Traveler wire goes to LINE, the second Traveler wire goes to CONTROL. The Light wire goes to LOAD. Connect a white neutral wire to the NEUTRAL Terminal. You may have to tap into a neutral wire bundle with an additional white wire 6-8" long.
10. 8. Re-check all connections, Turn power ON at Circuit Breaker.
10. Press Master Switch paddle once, you will hear the switch CLICK and the light should turn ON. Press paddle again, you will hear the switch CLICK and the light should turn OFF. Press the Slave Switch paddle once, and the light should turn ON, (the Master will CLICK). Press the Slave Switch paddle again, and the light should turn OFF (the Master will CLICK).
11. You are now ready to control the switch with an X10 Remote Control Module: desktop, wireless handheld, Security Panel, etc. The default address is "A1". If you wish to change the code, the Code Dials are behind the paddle of the Master Switch only. Remove the paddle with a small flat screwdriver applied to the side of the paddle at the center fulcrum point. Insert screwdriver in small gap space between switch plate and paddle and flip the paddle up from its side.
12. Mount the Switch(s) in the wall box(s) and attach the switch cover plates.

Note: 4-Way circuits can be replaced using the WS13A and two (2) WS14A Slave Switches.

This picture represents the switches in a "3-Way - 4-Way - 3-Way" circuit.

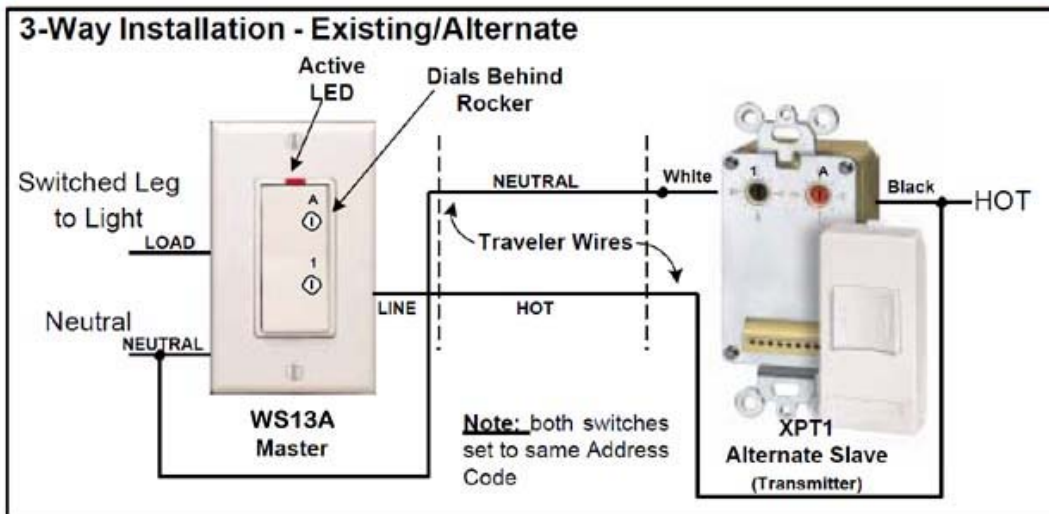
Simply connect a WS14A in the middle box (noted by 4 wires removed from the existing 4-Way switch):

1. Connect the 2 traveler wires that make connection from the Switch connection on the first WS14A Slave and the CONTROL screw connection on the WS13A Master, both to the Switch terminal on this 4-Way WS14A.
2. Connect the 2 traveler wires that make connection from the Live connection on the first WS14A Slave and the LINE screw connection on the WS13A Master, both to the Live terminal on this 4-Way WS14A.



20A Wall Switch - Receiver

WS13A



Installation: for 3-Way / 4-Way operation - Existing/Alternate

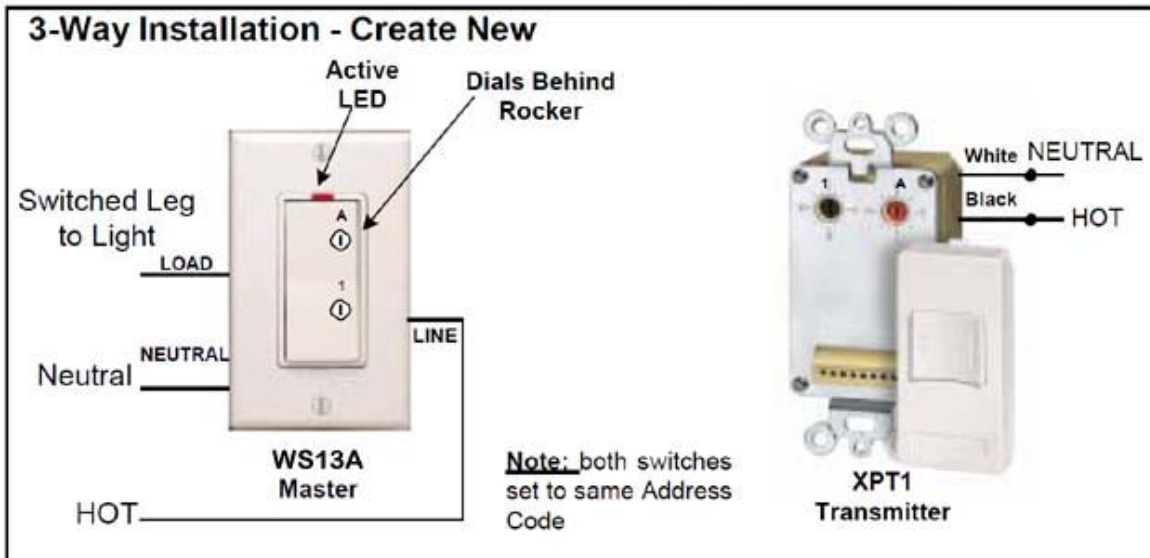
Note: A 3-Way / 4-Way system, by definition, means two or more existing wall switches which operate one single light (can be multiple lights if all come on together). In this alternate installation instruction, the WS14A switch may not work well due to longer traveler wire runs between multiple switches. The XPT1 Transmitter will work over the longer wires between multiple switches.

1. Turn power OFF at Circuit Breaker.
2. Pull-out the existing 3-way wall switches from the two switch boxes.
3. Remove the common-side wire (by itself) from the two switches. In one switch box, that single wire is HOT, in the other switch box that single wire goes to the light.
4. With Breaker ON, determine which wire is HOT. Use a voltmeter and measure between ground and each wire individually. One will read 120V, the other 0V. Turn Breaker OFF. Mark the wires as to which one is HOT and which one goes to the light.
5. The Alternate XPT1 Slave Switch (Transmitter) is installed in the switch box which has the HOT wire. The Master Switch is installed in the switch box that has the wire that goes to the light.
6. Inspect inside the wall switch box (that has the wire going to the light) for existence of white neutral wire(s) capped-off. If no white neutral wires exist, STOP. You CANNOT use the WS13A unless you run a neutral wire to this box. (In this case, if Neutral is available at the Slave position, then one of the traveler wires can be utilized to carry Neutral to the Master Switch or vice versa).
7. With Breaker OFF, remove the existing two wall switches. Three wires (minimum) remain protruding out of each switch box. At the Slave switch box, one is HOT; the other two wires are the traveler wires. They may be the same color, normally they are different colors. At the Master switch box, one is the Light wire; the other two wires are the traveler wires. They may be the same color, normally they are different colors.
8. With Breaker OFF, install the Alternate XPT1 Slave Switch (Transmitter) first. The HOT wire goes to the XPT1 Black wire bundled with one Traveler wire, the second Traveler wire goes to the XPT1 White wire (assuming Neutral will be picked up at the Master box).
9. With Breaker OFF, install the Master Switch second. The One HOT Traveler wire goes to LINE; the second Traveler wire goes to the NEUTRAL Terminal together with a white neutral wire from the box NEUTRAL, as previously mentioned. You may have to tap into a neutral wire bundle with an additional white wire 6-8" long. The Light wire goes to LOAD.
10. There will be no connection to the CONTROL TERMINAL needed.
11. Re-check all connections, Turn power ON at Circuit Breaker.
12. Press Master Switch paddle once, you will hear the switch CLICK and the light should turn ON. Press paddle again, you will hear the switch CLICK and the light should turn OFF. Press the alternate XPT1 Slave Switch Transmitter "ON" position once, and the light should turn ON, (the Master will CLICK). Press the alternate XPT1 Slave Switch Transmitter "OFF" position once, and the light should turn OFF (the Master will CLICK).
13. You are now ready to control the switch with an X10 Remote Control Module: desktop, wireless handheld, Security Panel, etc. The default address is "A1" for both switches. If you wish to change the code, the Code Dials are behind the paddle/keypad. Remove the paddle with a small flat screwdriver applied to the side of the paddle at the center fulcrum point. Insert screwdriver in small gap space between switch plate and paddle and flip the paddle up from its side. Remove the Keypad from the Transmitter, with fingers pulling from bottom, to change the XPT1 Address Code.
14. Mount the Switch(s) and Transmitter(s) in the wall box(s) and attach the switch cover plates.

NOTE: You can use additional XPT1 Wall Transmitter Switches to augment existing 4-Way or greater systems. Continue using the existing traveler wires to carry HOT and Neutral to the additional existing Switch Box locations. Then install the XPT1 in those additional boxes with traveler wires, connecting to HOT and Neutral

20A Wall Switch - Receiver

WS13A



Installation: for 3-Way operation - Create New

Note: A 3-Way system, by definition, means two existing wall switches which operate one single light (can be multiple lights if all come on together). In this NEW installation instruction, there are no traveler wires between switches. The XPT1 Transmitter will be connected to HOT and NEUTRAL only. It will communicate with the Master Switch via existing power wires.

1. Turn power OFF at Circuit Breaker.
2. Pull-out the existing single-pole wall switch from the switch box.
3. Inspect inside the wall switch box for existence of white neutral wire(s) capped-off. If no white neutral wires exist, STOP. You CANNOT use the WS13A unless you run a neutral wire to this box.
4. Remove the existing wall switch. Two wires remain protruding out of switch box. One is HOT; the other goes to the light/load. They may be the same color.
5. With Breaker ON, determine which wire is HOT. Use a voltmeter and measure between ground and each wire individually. One will read 120V, the other 0V.
6. With Breaker OFF, connect a white neutral wire to the NEUTRAL Terminal. You may have to tap into a neutral wire bundle with an additional white wire 6-8" long.
7. Connect the HOT wire to the LINE Terminal; connect the other wire to the LOAD Terminal.
8. There will be no connection to the CONTROL TERMINAL needed.
9. Re-check all connections, Turn power ON at Circuit Breaker.
10. Press switch paddle once, you will hear switch CLICK and light should turn ON. Press paddle again, you will hear switch CLICK and light should turn OFF.
11. You are now ready to control the switch with an X10 Remote Control Module: desktop, wireless handheld, Security Panel, etc. The default address is "A1". If you wish to change the code, the Code Dials are behind the paddle. Remove the paddle with a small flat screwdriver applied to the side of the paddle at the center fulcrum point. Insert screwdriver in small gap space between switch plate and paddle and flip the paddle up from its side.
12. Install the XPT1 Wall Transmitter Switch. You will need an existing or new switch box which has power run to it.
13. With Breaker OFF, connect the XPT1 Black wire to HOT, connect the XPT1 white wire to Neutral. Turn Breaker ON.
14. Press the XPT1 Switch "ON" position once, and the light connected to the Master Switch should turn ON, (the Master will CLICK). Press the XPT1 Switch "OFF" position once, and the light should turn OFF (the Master will CLICK).
15. To change the XPT1 Address Code, remove the Keypad, with fingers pulling from bottom, then turn the dials, with small flat screwdriver, to the desired Address Code. Keep the WS13A and XPT1 codes identical.
16. Mount the Switch(s) and Transmitter(s) in the wall box(s) and attach the switch cover plates.

NOTE: You can use additional XPT1 Wall Transmitter Switches to augment new 4-Way or greater systems. You will need additional wall switch boxes with power run to them. Then install the XPT1 Transmitter, connecting HOT and Neutral.

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