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› [Reliance Controls](#) /

› Reliance Controls A510C Pro/Tran2 50-Amp 10-Circuit Manual Transfer Switch User Manual

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Model: A510C

INTRODUCTION

The Reliance Controls A510C Pro/Tran2 Manual Transfer Switch is designed to safely connect a portable generator to your home's electrical system, allowing you to power essential circuits during an outage. This unit is UL listed to UL standard 1008 and is suitable for use in accordance with Article 702 of the National Electrical Code ANSI/NFPA 70. It features a painted steel cabinet and is manufactured in the USA.



Figure 1: Front view of the A510C Pro/Tran2 Manual Transfer Switch with the cover removed, displaying the internal circuit breakers and transfer switches.

SAFETY INFORMATION

WARNING: Installation must be performed by a qualified electrician in accordance with all local and national electrical codes. Failure to do so may result in serious injury, death, or property damage.

- Always disconnect power at the main service panel before working on electrical wiring.
- Ensure the generator is off and disconnected before operating the transfer switch.
- Do not overload the transfer switch or individual circuits. Refer to the circuit breaker ratings.
- Never attempt to backfeed power into the utility grid. This unit is designed to prevent backfeeding.
- Keep children and unauthorized personnel away from the transfer switch and generator during operation.

SETUP AND INSTALLATION

The A510C transfer switch is designed for indoor installation near your main service panel. It can be surface mounted or recessed using an optional trim kit.

Tools and Materials Required:

- Screwdrivers (Phillips and flathead)
- Wire strippers/cutters
- Voltmeter
- Drill with appropriate bits
- Conduit and fittings (if not using included flexible conduit)
- Wire nuts or approved connectors
- Personal protective equipment (PPE): safety glasses, insulated gloves

Installation Steps:

1. **Plan Circuit Selection:** Identify the 10 circuits in your main service panel that you wish to power with the generator. These should be essential circuits like lights, refrigerator, furnace, etc. Note their breaker sizes and types (single-pole or double-pole).
2. **Mount the Transfer Switch:** Choose a suitable location near your main service panel. Securely mount the transfer switch to a wall stud or other sturdy surface using appropriate fasteners. Ensure it is level and easily accessible.
3. **Connect to Main Panel:**
 - Turn off the main breaker at your service panel. Verify power is off using a voltmeter.
 - Route the flexible conduit from the transfer switch to the main service panel. Secure it with appropriate connectors.
 - Disconnect the load wires from the selected circuit breakers in the main panel. Extend these wires to the transfer switch using the provided color-coded wires. Connect the load wires to the corresponding terminals within the transfer switch.
 - Connect the wires from the transfer switch back to the original circuit breakers in the main panel.
 - Connect the neutral and ground wires as per the wiring diagram provided with the unit.
4. **Connect to Generator Inlet:** Route appropriate gauge wire (e.g., 6 AWG for 50-Amp service) from the transfer switch to an outdoor generator power inlet box (sold separately). Ensure all connections are secure and weather-tight.
5. **Final Checks:** Double-check all wiring connections for tightness and correctness. Ensure no bare wires are exposed. Close and secure the covers of both the transfer switch and the main service panel.



Figure 2: Side view of the A510C Pro/Tran2 Manual Transfer Switch, illustrating the flexible conduit connection point for wiring to the main service panel.

OPERATING INSTRUCTIONS

Follow these steps to safely transfer power from utility to generator and back.

To Transfer Power to Generator:

1. **Reduce Load:** Turn off or unplug non-essential appliances to minimize initial load on the generator.
2. **Connect Generator:** Plug your portable generator into the outdoor power inlet box.
3. **Start Generator:** Start your generator and allow it to warm up for a few minutes. Verify stable voltage output.
4. **Transfer Circuits:** For each circuit you wish to power, locate its corresponding switch on the A510C transfer panel. Move the switch from the "LINE" (utility) position to the "GEN" (generator) position. The indicator lights above the switches will illuminate when power is available from the generator.
5. **Restore Power:** Once all desired circuits are transferred, you can turn on the circuit breakers for those circuits in your main

panel.

To Transfer Power Back to Utility:

1. **Reduce Load:** Turn off or unplug non-essential appliances.
2. **Transfer Circuits Back:** For each circuit, move its switch on the A510C transfer panel from the "GEN" position back to the "LINE" position.
3. **Shut Down Generator:** Turn off the generator and then disconnect it from the power inlet box.
4. **Verify Utility Power:** Confirm that utility power has been restored to your home.
5. **Restore Power:** Once all circuits are transferred back to "LINE", you can turn on the circuit breakers for those circuits in your main panel.



Figure 3: Front view of the A510C Pro/Tran2 Manual Transfer Switch with the outer cover open, showing the individual transfer switches and their "GEN" and "LINE" positions, along with indicator lights.

The A510C Pro/Tran2 transfer switch requires minimal maintenance. Regular inspection is recommended.

- **Annual Inspection:** Annually, or after extended periods of non-use, visually inspect the unit for any signs of damage, loose connections, or corrosion. Ensure all switches operate smoothly.
- **Cleaning:** Keep the exterior of the unit clean and free of dust and debris. Use a dry, soft cloth for cleaning. Do not use abrasive cleaners or solvents.
- **Professional Check:** Consider having a qualified electrician inspect the unit every few years to ensure continued safe and proper operation.

TROUBLESHOOTING

This section addresses common issues you might encounter.

Problem	Possible Cause	Solution
No power to circuits when on "GEN"	Generator not running or not producing power. Generator circuit breaker tripped. Transfer switch not fully in "GEN" position. Circuit breaker in main panel tripped.	Check generator fuel, oil, and start procedures. Reset generator's main breaker. Ensure transfer switch is firmly in "GEN" position. Reset corresponding circuit breaker in main panel.
Indicator lights not illuminating	No power from source (utility or generator). Faulty indicator light.	Verify power at the source. Contact customer support if power is present but light is off.
Burning smell or unusual noise	Overload or internal fault.	Immediately turn off all power to the unit. Do not attempt to operate. Contact a qualified electrician or Reliance Controls support.

SPECIFICATIONS

Model Number	A510C
Brand	Reliance Controls
Operation Mode	Manual
Current Rating	50 Amps
Operating Voltage	240 Volts
Number of Circuits	10
Circuit Type	Mixed (single-pole and double-pole)
Product Dimensions (L x W x H)	11.75 x 4.5 x 11 inches
Product Weight	18 Pounds
Contact Type	Normally Open
Connector Type	Screw Terminal

Actuator Type	Hinge Lever
UL Listed	Yes, to UL standard 1008
Country of Manufacture	United States

WARRANTY AND SUPPORT

This product includes a full manufacturer warranty. For warranty claims, technical assistance, or replacement parts, please contact Reliance Controls customer support.

Manufacturer: Reliance Controls

Refer to the official Reliance Controls website or the documentation included with your purchase for the most current contact information and detailed warranty terms.

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Example: How do I reset this device or fix this error?

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Model number, symptoms, what you tried, or the section of the manual you are using.

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