

GENESIS KIT for Rowe**INSTALLATION:** BC12R, 1400

Special tools needed – drill and a 5/32” bit

THE COIN DETECTOR LIGHT(S) ON THE COIN DISPENSER FRAME NEED TO BE THE NEWER “RED LED” TYPE. IF YOU HAVE THE OLDER LIGHT BULBS AND DIDN’T ORDER OPTIONAL REPLACEMENT LEDS, STOP NOW.

1. Turn off power to the changer.
2. Remove the existing bill acceptor and stacker from the changer.
3. Remove coin hopper and coin dispenser frame. If yours is an older changer that was converted to use a newer BA50 transport, the dispenser may have a wiring adapter on it to connect the older dispenser to Rowe’s newer harness. Leave this adapter on the dispenser; we will use it.
4. Remove CCC computer and slider bracket from left side of cabinet.
5. Remove the power supply and main harness from the cabinet. There is a separate harness which feeds the out-of-service light and bill return switch on the front. Leave this in place. If a heater and harness is in place, leave it in place.
6. Clean out whatever junk and dirt has accumulated over time.
7. Place the new control box from the Genesis conversion kit on the cabinet floor. Make sure the on/off switch is OFF.
8. One harness coming out of the control box has three wires: black, white, and green. This is the power harness. The end of this harness will plug into the existing mating 3-position connector along the left wall.
9. The next harness coming from the control box is for the bill acceptor and out-of-service light. The very long, two wire portion of this harness is for the changer out-of-service light. It is two wires in a 4 position connector. Route this portion of the harness up through the hole in the right/rear area of the cabinet where the power harness is. Bring these out-of-service wires up along the right side toward you and plug them into an existing 4 position plug on the side wall. Part of this existing plug wiring leads to the out-of-service light on the door. The remaining black connector for the bill acceptor will be plugged in later.
10. Modification of existing coin dispenser frame: Turn the assembly so you are looking at the rear (buckets and motors). Below the electrical solenoid coils are the 2 or 3 bucket door assemblies. There are three shafts which run horizontally and hold all the bucket door mechanisms. Remove the close/lower shaft. It only acts as a ‘stop’ for the springs. Note that the springs are on the near side of this shaft, and they are holding the bucket doors in the up (closed) position. Let the one end of each spring hang loose for now. Remove the upper/close shaft. Note how the spring bodies are located on this shaft. Between the solenoids and below them are white plastic “seesaw levers”. Remove the retaining clips that hold the levers on their shafts and remove the levers. Once the “seesaw levers” are removed, remove the steel ball and spring from above the levers. If the springs do not come out easily, you may leave them in. SET THE LEVERS, BALLS, AND SPRINGS ASIDE, as they will not be used. Re-install the upper/close shaft that was removed (as previously mentioned). Make sure you get the bodies of the door springs on the shaft as they were. When finished, the loose end of the door springs should be pointing up and away from you. Begin

reinstalling the lower/close shaft. Start by putting the shaft back in from the left end. Pull the loose end of the door spring towards you and down, and hook behind the lower shaft. This should now hold the left bucket door open (down). Continue for the remaining door(s). Make sure that you've reinstalled the retaining clips on the shafts. When you are finished, all doors should be held open by the springs.

11. IF YOUR DISPENSER HAS A COIN LAMP INSTEAD OF LEDS, USE THE FOLLOWING STEP. IF NOT, SKIP TO STEP 12. If the dispenser has a coin lamp, it needs to be replaced by the newer LED assembly. Remove lamp and rubber grommet. There is a hex-head screw about an inch below the lamp that needs to be removed. The new LED assembly installs into the lamp hole and the new longer screw included with kit goes back in where the shorter one was removed from. It will hold the new LED assembly in place. The LED blue wire should connect to the blue changer wire post where one of the lamp wires was connected. The black LED wire should connect to the black changer wire post where one of the lamp wires was connected.
12. Install the dispenser frame back into the changer. The remaining new kit harness will have a single connector which should match your dispenser (along with two wires with alligator clips on the end). Route this harness to the dispenser and plug into the dispenser. The two long wires with alligator clips should route under the dispenser. Bring these wires toward you and DO NOT connect for now. Don't forget the securing bolts at the dispenser top corners.
13. Now you will modify the coin hoppers. First empty the hoppers. Disassemble the rear mechanism and center baffle from the hopper shell. This is a standard maintenance procedure. If you're not familiar with it, see your changer manual. This is an excellent time to clean and service the hopper if this hasn't been done in a while. You are going to drill a small hole in each hopper and mount a small screw and washer to act as a 'hopper empty' sensor.

Standard Capacity Hoppers (holds about \$500 in quarters)

Drill a 5/32" hole in the plastic area on the lower front of the hopper. Center the hole from left to right and locate it 1- 9/16" down from the top of the black plastic. Slide the 1" washer over the 8/32 screw and install the screw into the hole from the inside of hopper. Thread and tighten the lock washer and nut onto the screw portion extending outside of the hopper. When you are finished, you will have about 3/4" of the screw sticking out. This is the new "hopper empty sensor" that the wire and alligator clip will attach to. Re-assemble the hopper in normal fashion.

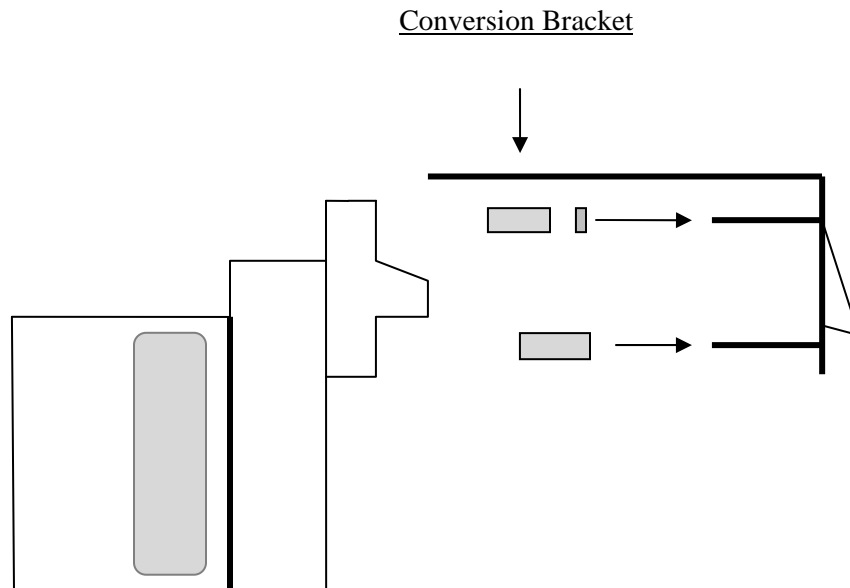
High Capacity Hoppers (holds about \$750 in quarters)

The bottom of the hopper shell is formed by three plastic pieces which stack together. Looking from the outside bottom, the center plastic piece is molded into 4 quadrants. You are going to drill a 5/32" hole in one of the quadrants which is closest to the hopper front. You'll need to be near the hopper centerline but you need to leave enough room for the nut and a wrench to tighten it. Stay about 3/8" away from the center rib. Center the hole in the hopper front/rear direction in the quadrant. Slide the 1" washer over the 8/32 screw and install the screw into the hole from the inside of the hopper. On the outside of the hopper, install the lock washer and nut onto the screw. Secure the screw and nut tightly which will bend the washer inside tightly against the plastic. When you are finished, you will have about 3/4" of screw sticking out. This is the new "hopper empty sensor" that the wire and alligator clip will attach to. Re-assemble the hopper in normal fashion.

14. Re-install the hopper into the dispenser frame. Leave the hopper empty for now.
15. The RED wire with alligator clip (from step 11) should clamp to the LEFT hopper 'empty screw' just installed. The YELLOW wire with alligator clip should clamp to the RIGHT hopper 'empty screw' just installed.
16. Now you will install the Genesis conversion kit's bill acceptor and bracket.

Rear Load bracket, Type I

- A. Remove the factory installed transport slider rails by removing the screws and nuts. The new bill acceptor mounting bracket will mount in this same location using the included screws and nuts in the original holes. The mounting holes in the new bracket are slotted slightly to allow for a proper snug fit against the front of the changer.
- B. Mount the bill acceptor onto the conversion bracket before installing the bracket into the changer. Thread an 8/32" nut onto the top studs (TOP STUDS ONLY) of the new bracket and tighten them against the front of the bracket. Then slide the white nylon spacers onto each of the four studs (see the diagram below). Install the bill acceptor onto the conversion bracket and attach with the provided nuts. **DO NOT OVERTIGHTEN.**



- C. The remaining wiring connector (from step #9) is used for the conversion kit's bill acceptor. The standard/default harness is configured to work with a 110v Mars AE2600 series bill acceptor. (Optional harnesses are available for Mars AE2400 or Pyramid 5400 acceptors. See alternate instructions if you are installing either of these optional acceptors.) Now connect the new harness's black connector to the acceptor at the 30 pin connector on the acceptor side. The 'tab' on a long side of the connector should allow it to be plugged in only one way correctly.

- D. Install the bracket with the mounted bill acceptor (with the 30 pin bill acceptor harness already connected) into the cabinet. Hold the bracket in place and install the mounting screws and nuts. Hand-tighten the nuts for now and ensure that the bracket is aligned with the front face. Then tighten the mounting screws and nuts.

TESTING OPERATION:

1. If you disconnected the changer's power outside the cabinet then restore the power now. Turn the controller switch ON. Once powered-up, you should hear the bill acceptor motors go through their own boot-up cycle. At this point the YELLOW LED on the new controller should be ON STEADY, and the changer out-of-service should be on. This is an error condition caused because all hoppers are missing or empty. This is good since you should have left hoppers empty. Try to insert a bill into the bill acceptor. It SHOULD NOT go in. The acceptor should be disabled.
2. Now fill the hopper just far enough to cover the "empty sensor washer" previously installed. Now push and release the reset button (next to the Yellow LED) on the controller box. You should now get a GREEN LED and the Red and Yellow should be off. The changer out-of-service light should now be off. The bill acceptor should now be enabled and capable of accepting bills. Insert a bill and check coin dispensing. Note that the coins are now paid out in 'real time' instead of being stored and paid from the coin buckets (now not used).
3. When the coin hopper signals empty (coins no longer surrounding sensing washer), the controller will finish whatever payout it may have been working on, and then the Yellow LED will go ON STEADY- indicating a SOLD OUT condition, and the Green LED will be out. This is where we were in step #19.
4. Fill hopper with coins. If the Green LED is not on, push the Reset button. The Green LED should come back on. Close up the changer. The changer should be ready to go.

NOTES:

- When the coins in the hopper no longer are "strongly touching" the empty sensor washer installed, a signal will be sent to the controller that the hopper is getting low on coins. The controller will finish the current payout operation it is working on. Once it is finished with its current payout, THEN it will remember that the hopper is no longer available and not use it. If the alligator clips are not attached to the sensor screws, then the controller will see this as empty hoppers.
- In the event that a hopper is very dirty or jammed, the controller will shut off the hopper after 40 seconds of running if the coin count has not been satisfied by then. It will consider this hopper as out of order or empty.
- Coins are paid-out in groups of twenty or less. If the total number of coins needed exceeds 20, there will be a short 4 second pause between paying out multiple groups of coins. This is to allow customer to empty coins from the smaller coin cups in some cabinets.
- The default situation is for the controller to be built and sent out based on 25 cent coin/token value. There is a jumper wire built into the controller circuit board which can be cut to change coin value to \$1. Call for instructions if you need to change this. Other special programming may also be available for other coin situations.

ERROR CONDITIONS:**YELLOW Error LED**

- ON STEADY- all hoppers empty, missing, or `timed-out' (dirty or jammed)
- 1 blink- Left hopper coin detector error. Either the coin detector is: out, blocked by foreign object, a coin pulse was too long, or the left hopper motor ran too long giving an extra/unexpected coin.
- 2 blinks- Right hopper coin detector error. Either the coin detector is: out, blocked by foreign object, a coin pulse was too long, or the right hopper motor ran too long giving an extra/unexpected coin.
- 3 blinks- Center hopper coin detector error. Either the coin detector is: out, blocked by foreign object, a coin pulse was too long, or the center hopper motor ran too long giving an extra/unexpected coin.
- 4 blinks- Bill acceptor vend signal stuck on. Either a faulty bill acceptor, shorted-out harness, or controller.
- 5 blinks- Unrecognized bill vend signal - Example = 3 vends pulses (\$3). Either power to the changer was interrupted when bill acceptor was paying out or a faulty bill acceptor.
- 6 blinks- Bill acceptor internal error. The bill acceptor has a known problem within itself. Check the acceptor for a jammed bill or blocked sensors. The acceptor may need service. Once the acceptor problem is corrected, the system controller should return to service by itself.
- “unfilled count” LED on- This light is on whenever the system is busy counting coins. If the changer has gone out of order with an error signal (above), and the red ‘unfilled light’ is ON, then the system knows that it DID NOT properly finish paying out all the coins from the last transaction. If the ‘unfilled LED’ is off, then the last transaction was successfully finished.