



Service Training

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DigiSync Room Slide System by Kwikkee Products



Extending Slide Out Room

See Operation Safety Precautions before proceeding.

To extend the room slide simply press and hold the "OUT" button. To stop the room during operation, release the button. Once the room has reached its full extension it will stop automatically. The extend button will not function again until the retract button has been pressed.

Retracting Slide Out Room

See Operation Safety Precautions before proceeding.

To retract the room simply press and hold the "IN" button. To stop the room during operation, release the button. Once the room has completely retracted it will stop automatically. The "Retract" button will not function again until the extend button has been pressed.

In the event of a total system failure, two crank handles may be used to retract or extend the room.

Crank Mode:

To use the crank handles open the luggage compartment doors exposing the front of each room slide mechanism. Insert the crank handle into the tube and align the drive pin at the rear of the tube with the notches in the crank handle. It may be necessary to move the handle slightly from side to side. The crank handle will only move the tube that it is inserted into. Consequently you will need to alternate between each crank handle on each side to move the room in or out. If help is available a second person cranking on the other handle simultaneously will greatly speed up the process.

Safety Precautions

Prior to extending the room, take a moment to insure the following:

1. See coach manufacturer instructions regarding the leveling of the coach and room slide out operation.
2. If your coach is equipped with a luggage compartment beneath the room that extends, make sure that the luggage compartment doors are closed so that they will not interfere with slide out operation.
3. Make sure that there are no obstacles that could interfere with extension on the outside of the coach.
4. Check to ensure that all safety travel straps / bars have been removed and that no obstructions exist between the inside wall flange and the inside wall of the coach.
5. Park Brake must be set.

If the slide out room is equipped with a couch or other furniture, make sure that the room is clear of people and pets during extension. Once the room has reached its maximum extension the room may be occupied once again.

Prior to retracting the room take a moment to insure the following:

1. See coach manufacturer instructions regarding the leveling of the coach and room slide out operation.
2. Make sure that there are no obstacles that could interfere with retraction on the inside of the coach.
3. Check the outside of the coach to make sure that no obstacles exist between the outer wall flange and the outside side wall of the coach.
4. If the slide out room is equipped with a couch or other furniture, make sure that the room is clear of people and pets during retraction. Once the room has reached its maximum extension / retraction the room may be occupied once again.
5. Park Brake must be set.

Troubleshooting: Retracting the Room

In the event there is an error detected on your DigiSync Room Slide System, the left LED on the control panel will blink an error code (See Error Codes for details). To retract the room after an error is detected you can override the synchronization programming and operate the room in the Manual Mode.

Manual Mode

Manual Mode permits the operator to individually move the two room arms by pressing the IN and OUT buttons on the control pad. **This mode can be used only if there is not a motor failure.** To override the encoder and enter the Manual Mode, press and hold the SERVICE button until the two LEDs begin to flash. See **Figure 1** for location of the SERVICE button.

While in the Manual Mode each of the two, room slide arms are activated by pressing and holding the IN and OUT buttons. One button will retract the front arm. The other will retract the back arm. Both IN and OUT buttons may be held down at the same time to simultaneously activate both arms to retract the room.

If one side of the room gets ahead of the other, release that button until the other arm catches up. The current limiting feature of the control still functions in the Manual Mode so each side can be fully retracted until it stops.

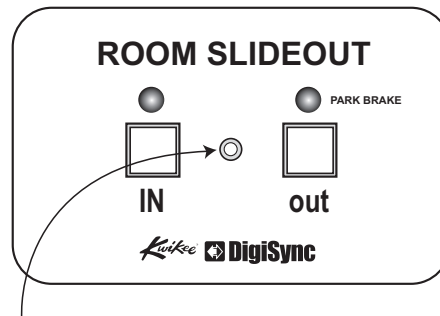
Once the room has been retracted the control will return to the automatic mode after 60 seconds. You can manually return to automatic mode by pressing the SERVICE button.

Troubleshooting: Extending the Room

If the red Park Brake LED is flashing while attempting to extend the room, set the vehicle's parking brake.

In the event there is a system failure while extending the room you must use the Crank Mode described on first page.

Figure 1



Service Button: Access using ballpoint pen, toothpick, etc.

Note: On earlier versions of the control panel the 'STOP' button functions as the Service Button.

Error Codes

DigiSync is equipped with onboard diagnostics capabilities. In the event of a system failure the left LED on the control panel will blink to display several possible error codes. An error code will not be displayed unless one of the control panel buttons has been pressed. For example, control panel will not display error code for low battery voltage unless you are trying to extend or retract the room when low voltage is present.

When an error is detected the left led will begin to flash. The error code can be determined by counting the number of flashes in between each pause. See the Onboard Diagnostics Key below for details. The error code may be cleared at any time by pressing the SERVICE button or by allowing the system to time out after 60 seconds. Once cleared, the operation can be tried again. If the error code appears again, see Manual Mode and/or Crank Mode sections.

# of Flashes	Descriptions of Problem
1	Unit Timed out (ran for 90 sec without reaching end of stroke)
3	Battery Voltage <10 volts (detected when move requested)
4	Battery Voltage <8 volts (detected during move)
5	Battery Voltage >18 volts (detected when move requested)
6	Stall on Rear Actuator only
7	Stall on Front Actuator only
8	Short Detect on Rear Motor
9	Short Detect on Front Motor
10	No Current Detect, Rear Motor
11	No Current Detect, Front Motor
12	No Encoder Signal detected, Rear Actuator
13	No Encoder Signal detected, Front Actuator
14	Rear Actuator did not resync with Front Actuator within 5 seconds
15	Front Actuator did not resync with Rear Actuator within 5 seconds

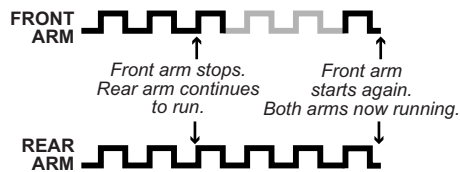
Note: Manual Mode and corresponding Front and Rear Actuator locations

Front Actuator: Retract / In button

Rear Actuator: Extend / Out

Slide Arm Synchronization

DigiSync uses an electronic timing system to synchronize two slide arms. As arms extend, encoders send pulses from both arms to the control. The control counts the pulses and continually looks for differences between the front and rear arm. If the difference reaches a preset limit, the power to the faster arm is momentarily shut down until the slower arm catches up. Then the power is reapplied.

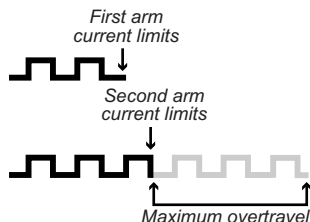


Current Limit Sensors

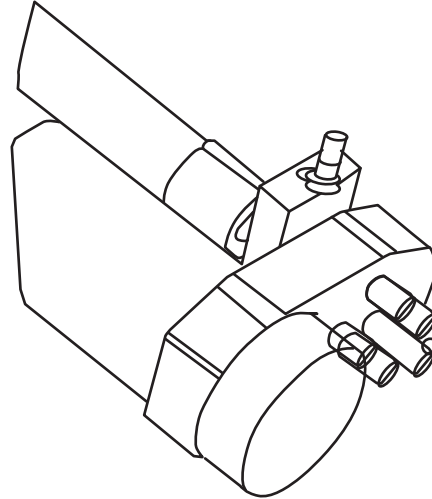
DigiSync uses current limit sensors on each arm to detect the end of travel at the 'in/out' stops built into the tube. The sensors can also detect a jam in the system through an over current situation.

Usually one arm will make contact slightly ahead of the other due to rooms being slightly out of square, stops not perfectly set, or one arm lagging the other within the preset limit. When the first arm makes contact and the current limit is reached the second arm is allowed to travel 1/2" beyond its current position. It should make contact with the stop before the excess travel limit is reached and current limit. If this happens the control shuts down and the green LED on the operating panel goes out.

If the arm does not stop before the preset limit, the green LED on the operating panel will flash an error code. Count the flashes to determine the error code (see previous page.) During the initial setup this is generally caused by the stops being set improperly or the encoders not being zeroed at the full retract position.



DigiSync Motor,
Linear Actuator,
KWIKEE P/N 1820106

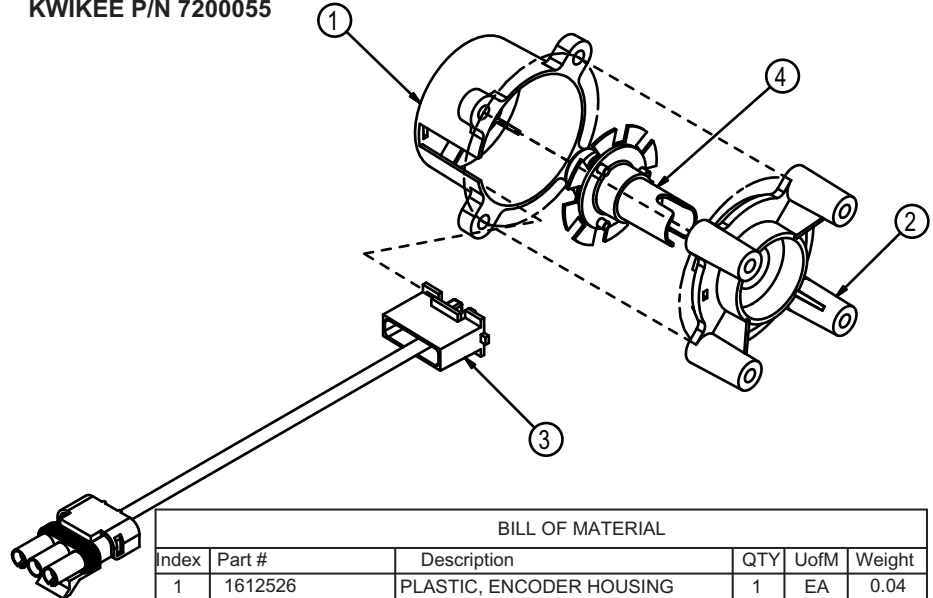


BILL OF MATERIAL

Part #	Description	QTY	UofM	Weight
1820106	MOTOR, LINEAR ACTUATOR	1	EA	14.65

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DigiSync Encoder Assembly,
available in kit form only,
KWIKEE P/N 7200055



BILL OF MATERIAL

Index	Part #	Description	QTY	UofM	Weight
1	1612526	PLASTIC, ENCODER HOUSING	1	EA	0.04
2	1612527	PLASTIC ENCODER HOUSING BASE	1	EA	0.05
3	1801125	ASSY ENCODER SWITCH	1	EA	0.02
4	ASSY_ENCODER_B	ASSY, ENCODER VANE	1	EA	0.12
					Total Weight
					54.6

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