

## Trouble Shooting Reverse Polarity Wiring Problems

### Switch doesn't work properly but the shaved kit transmitters do work

**Step 1** Did you purchase a switch kit designed for three switches and only use two switches?

**YES** - Connect third switch

**NO** - Check wiring

### Switch works properly but shaved kit transmitters do not work

**Step 1** Does the LED on the remote light up when you press the transmitter button?

**YES** - Transmitter works properly continue to step 2

**NO** - Replace transmitter battery

**Step 2** Can you hear the receiver make a clicking sound when you press channel 1 or 2 on the transmitter?

**YES** - Receiver and relay work properly. Go to step 4

**NO** - Go to step 3

**Step 3** Does the LED on the receiver light up when the transmitter button is pressed?

**YES** - Transmitter is properly learned and OK, go to Step 4

**NO** - Check power and ground to the receiver and then reprogram the transmitters

**Step 4** Use a test light to check for voltage at pin 87 of the relay. Did the test show greater than 10 volts?

**YES** - The relay checked works properly. The other side of the motor is not properly grounded.

**NO** - Connect pin 87 to a proper voltage source.

### Limited Warranty Statement

## SPAL USA WARRANTY STATEMENT

SPAL USA warrants this product to be free from defects in material and workmanship for a period of one (1) year from the date of sale to the original purchaser, and not more than two (2) years from the date of manufacture. SPAL USA will repair this product free of charge if, in the judgment of SPAL USA, it has been proven defective within the warranty period. The product should be returned, at the customer expense, to the location of original purchase. This warranty does not cover any expenses incurred in the removal and/or reinstallation of the product. This warranty does not apply to any product damaged by improper installation, accidental misuse, abuse, improper line voltage, fire, flood, lightning, or other acts of God, or a product altered or repaired by anyone other than SPAL USA. This warranty is in lieu of other warranties, expressed or implied, including any implied warranty of merchantability. No person is authorized to assume for SPAL USA any other liability concerning the sale of this product.

**IMPORTANT-KEEP YOUR INVOICE WITH THIS WARRANTY STATEMENT!**

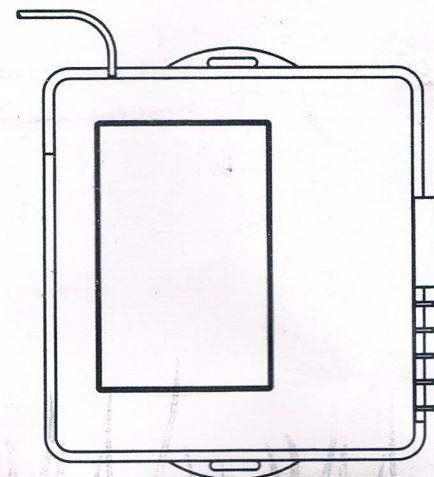


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# SHAVED DOOR KIT

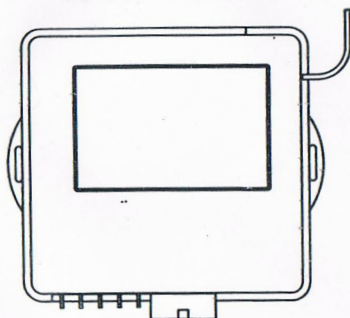
## Shaved-B

## Installation Manual & Operation Instructions

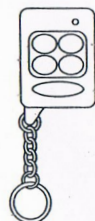


## Each Kit Contains The Following Components

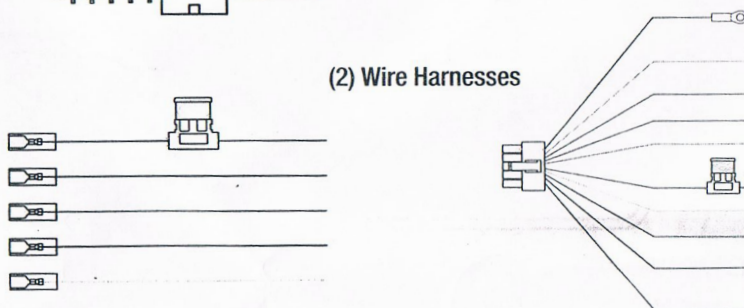
(1) Receiver



(2) Remotes



(2) Wire Harnesses



### Installation Instructions for SPAL Shaved Door Handle Kit Shaved-40

This kit is designed to operate up to seven functions via the four-button remote control.

Channels 1 and 2 are Positive outputs used to open your drivers and passenger doors. Channels 3 through 7 are all negative outputs that can be used to operate power door locks, power door releases, truck releases, control linear actuators, or roll power windows up or down, with an additional (external) relay. (See Page 7)

**\*\*Proper wiring is critical to the correct operation of this product. Inspect all wiring to be certain of proper connections, a quality ground, and appropriate fusing. Also check wire routing, keeping wires away from potential damage such as moving parts\*\***

## Operation Section

### Basic Function of the SPAL Shaved Door Kit

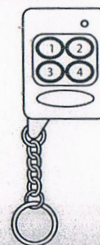
The remote control supplied with your kit has four buttons, but is capable of controlling 7 channels.

|                   |                      |
|-------------------|----------------------|
| Channel 1: +12VDC | Opens drivers door   |
| Channel 2: +12VDC | Opens passenger door |
| Channel 3:        |                      |
| Channel 4:        |                      |
| Channel 5:        |                      |
| Channel 6:        |                      |
| Channel 7:        |                      |

Optional negative outputs (250 mA)

**\*\*Additional relays are required for each channel\*\***  
(See Page 7 For Wiring Diagrams)

### Basic Functions Of The Remote Control



To Operate:  
Channel 1  
Channel 2  
Channel 3  
Channel 4  
Channel 5  
Channel 6  
Channel 7

Press:  
Button 1  
Button 2  
Button 3  
Button 4  
Button 1 + Button 2  
Button 1 + Button 3  
Button 1 + Button 4

## Programming Section

### Reprogramming the Remote Transmitters:

**\*\*This Shaved Door kit can accept up to 4 SPAL remote transmitters (Part #MULTI-RCU7TX)\*\***

The remote transmitters are shipped Pre-Programmed. In the event that a remote transmitter loses the programmed code, or if you wish to add more remote transmitters, follow these instructions:

- Make sure ignition is OFF.
- Locate the programming button located on the side of the receiver, next to the LED.
- Press the programming button 3 times quickly (The LED will light).
- Press Button (1) on each transmitter you want learned in to the receiver (one at a time). There is a 10 second window to learn all new transmitters.
- The LED will remain lit for approximately 10 seconds after the last remote transmitter has been recognized.
- Wait for the LED to go out. Then test each remote transmitter for proper function.

### Jumper Settings:

To avoid damage to attached components, the jumpers must remain in the factory setting.



### Dip Switch Settings:

#### If The Control Unit Is Connected To:

|           | Dip Settings* |          |
|-----------|---------------|----------|
| Solenoids | 1-2: Off      | 3-7: Off |
| Actuators | 1-2: On       | 3-7: Off |



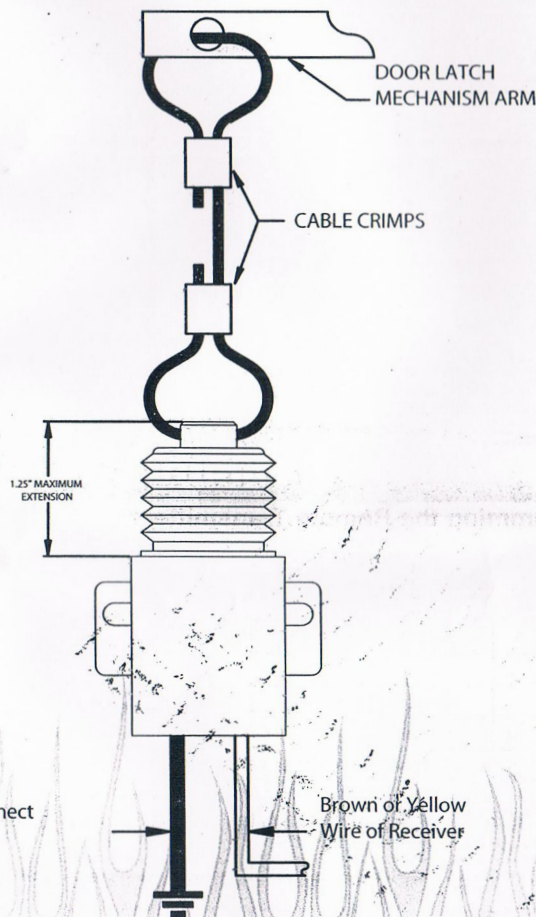
DIP SWITCHES

\* Switches 3-8 will always be in the OFF position



## Mounting / Wiring Section

- The solenoids provided in the SHAVED40 kit can be mounted horizontally or vertically (with the plunger UP) to the door with the provided hardware.
- Attach the solenoid to the door latch with the supplied cable and cable crimp.  
-Loop the cable through the solenoid and the door latch and crimp the two ends together with the cable crimp.



Black: Connect to ground

Brown or Yellow Wire of Receiver

### Solenoid Wiring:

- Attach the white wire of the **Driver Door** Solenoid to the Brown wire (large gauge/channel 1, from spade connector harness) of the receiver.
- Attach the white wire of the **Passenger Door** Solenoid to the Yellow wire (large gauge/channel 2, from spade connector harness) of the receiver
- Connect the remaining black wire of the solenoid to a ground located on the vehicle body. (The door is not a proper grounding source!)

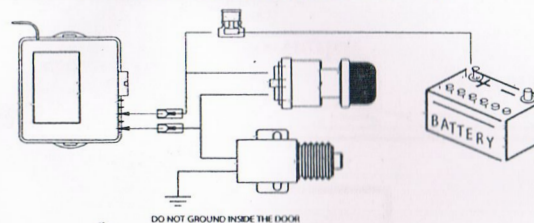
**\*\*A mechanical backup switch should be utilized in the case of power failure. (See the optional wiring section)\*\***

4

## Optional Wiring Section

### Emergency/Backup Switch (not included in kit):

It is strongly recommended that an emergency/backup switch be mounted outside the vehicle in the case of lost transmitters or keys locked in the vehicle.



**\*\*12 Gauge Wire Must Be Used\*\***

### Inside Button Option:

Internal Buttons: If you wish to remove the door handles from inside the vehicle and use power buttons, you will need to wire the buttons as follows:

|                | Power Wire                 | Ground Wire    |
|----------------|----------------------------|----------------|
| Drivers Door   | Grey wire of Control Unit  | Chassis Ground |
| Passenger Door | Green wire of Control Unit | Chassis Ground |

### Wiring Options

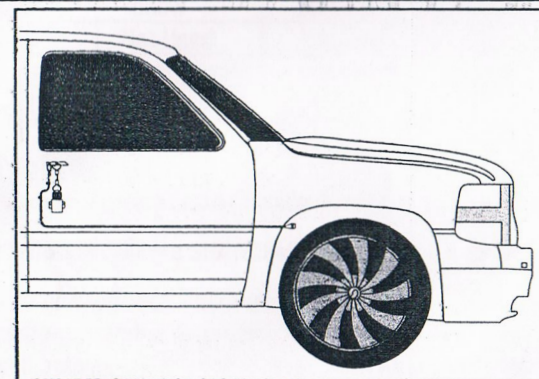
| Item to be Activated | Description of Function   | Relay Type | # of Relays Required | Diagram              |
|----------------------|---------------------------|------------|----------------------|----------------------|
| 1 Power window motor | Move window up & down     | SPDT       | 2                    | Reverse              |
| 1 Power window motor | Move window one direction | SPDT       | 1                    | Reverse              |
| Linear actuator      | Move in & out             | SPDT       | 2                    | Reverse              |
| Solenoid             | Activate Solenoid         | SPST       | 1                    | Positive or Negative |
| Trunk Release        | Open the Trunk            | SPST       | 1                    | Positive or Negative |
| Door lock actuator   | Lock & unlock             | SPDT       | 2                    | Reverse              |

SPST = Single pole single throw relay, 30 or 40 amp

SPDT = Single pole double throw relay 30 or 40 amp

Relays can either be purchased from SPAL USA or from your local auto parts store.

## Optional Mechanical Backup Cable (HR-Entry)



A mechanical backup cable should be utilized in all shaved door applications. By using a mechanical backup, you do not run the risk of being locked out of the vehicle if the battery were to go dead.

SPAL USA offers a universal mechanical cable (part #HR-ENTRY) that can be run to a concealed location, such as the front wheel well.

6



