

## Toyota 24-pin Dual Camera Blind Spot Monitoring System (Kit # 9002-2911)

Please read thoroughly before starting installation and check that kit contents are complete.

### Items Included in the Kit:

- 2 Adjustable angle cameras
- 2 Camera pods
- 2 Chassis harness
- 2 Foam gaskets
- Mounting screws
- 2 Power/video harness
- 2 Hole saws
- 2 Angle adjustment tools
- 6-way video switcher
- 24-pin connector harness with RCAs
- 28-pin connector harness
- These instructions

### Tools & Supplies Needed:

- Wire strippers
- Wire cutters
- Electrical tape
- Zip ties
- Plastic panel removal tools
- Digital Volt Meter / BCM safe test light
- Screwdriver
- Socket set
- Wrench



### **Safety Precautions:**

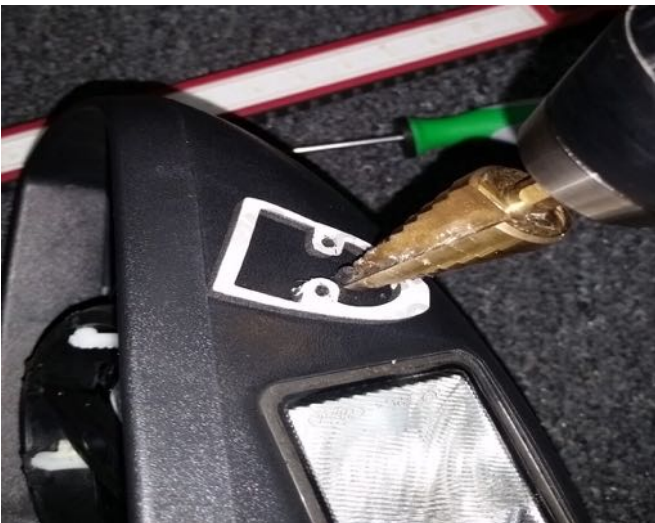
- Work in well ventilated area that is clear of obstructions.
- Secure vehicle with tire chucks in both front and rear of tires.
- Turn vehicle accessories OFF and ensure ignition key is in OFF position.
- Wear safety goggles and snug fitting clothes.
- Use tools only for their intended purpose and which are in good repair.
- Only perform this task if confidence, skill, and physical ability permit.

**NOTE: We strive to provide accurate and up-to-date installation instructions. For the latest full color instructions, as well as an installation video, please visit [www.brandmotion.com](http://www.brandmotion.com)**

1. Remove the inner door panel to gain access to the wiring and side view mirror mounting bolts.
2. Use the foam gasket and attach it to the bottom of the mirror plastic. Attach it so the flat area aims towards the rear of the vehicle.



3. Carefully remove the mirror glass from the mirror. *Each vehicle is different; consult the vehicle's service guide for how-to steps.*
4. Remove the mirror from the vehicle housing from the vehicle.
5. Drill 2 pilot holes for the mounting screws and a pilot hole in the center of the camera pod opening for the harness to be ran through.



## INSTALLATION INSTRUCTIONS

6. Mount pods by screwing from the inside of the mirror. *Using a Phillips number 1 tip with a 1/4 wrench works the best.*



7. Run the camera harness into the mirror and through the arm of the mirror, into the door.







8. Run the camera harness into the vehicle through the door boot.
9. Connect the video/power harness to the chassis harness that was just ran into the vehicle.

## INSTALLATION INSTRUCTIONS

10. Connect the BLACK wire to ground and the RED wire to accessory 12-volt power. Repeat for the other door.
11. Locate the 28 terminal connector on the back of the radio and unplug it.
12. Plug the short 28-pin connector harness from the kit into the back of the radio. Plug the connector you removed from the back of the radio into the other end of the 28-pin connector harness.
13. Connect the wire from the connector harness labeled REV IN to the blue wire on the 6-way video switcher.
14. Connect the wire from the connector harness labeled REV OUT to the white/black wire on the 6-way video switcher. (See diagram #1)
15. Locate the 24-terminal connector on the back of the radio and unplug it.
16. Plug the short 24-pin connector harness with the RCAs from the kit into the back of the radio. Plug the connector you removed from the back of the radio into the other end of the 24-pin connector harness.
17. Connect the female RCA on the 24-pin connector harness to the VIDEO OUT of the 6-way switcher.
18. Connect the male RCA from the 24-pin connector harness to the REAR CAM INPUT on the 6-way video switcher. (See diagram #2)
19. Connect and match the YELLOW video RCA from the camera to the RCA input that corresponds to the door that is being worked on (left or right.)
20. Connect the trigger wires from the video switcher to the positive turn signal wires. Left

input trigger wire is PURPLE, the right input trigger wire is PINK.

21. Connect the BLUE reverse trigger output wire from the video switcher to the aux-trigger input on the dual camera interface.
22. Connect the video output RCA from the video switcher to the input of the interface or video display.
23. The DIP switches have to be set on the video switcher for the turn signal input wires to be able to trigger the switcher (see DIP switch diagram below).

			
<b>DIP SWITCH 1: UART CONTROL</b>	<b>DIP SWITCH 2: TURN SIGNAL CONTROL</b>	<b>DIP SWITCH 3: TURN CAMERA OVER RVC</b>	<b>DIP SWITCH 4: FRONT CAM ACTIVATION</b>
<i>UP:</i> UART command control ONLY. For future use. <i>DOWN:</i> Analog triggers ONLY. Standard universal control.	<i>UP:</i> Turn signal cameras will only stay active for 12 seconds. <i>DOWN:</i> Turn signal cameras will display as long as there is a 12v signal to the module.	<i>UP:</i> When in reverse, if active, turn signals will display instead of RVC. <i>DOWN:</i> RVC has priority regardless of turn signal inputs.	<i>UP:</i> Using a momentary button to activate <b>input 2</b> will display F-CAM for 12 seconds. <i>DOWN:</i> Front CAM will display as long as there is a 12v signal to the module.

24. Check the angle and view. If the angle needs to be changed, use the supplied angle adjustment tool to adjust the camera.
25. Reassemble the vehicle in the reverse order.

INPUT	LED 1	LED 2
Idle	Fade in/out	Fade in/out
RVC	ON	
FVC		ON
Right Turn		ON (blink)
Left Turn	ON (blink)	
AUX VID	ON (solid)	ON (solid)
Trailer CAM	ON (alternating)	ON (alternating)

**DIAGRAM #1**

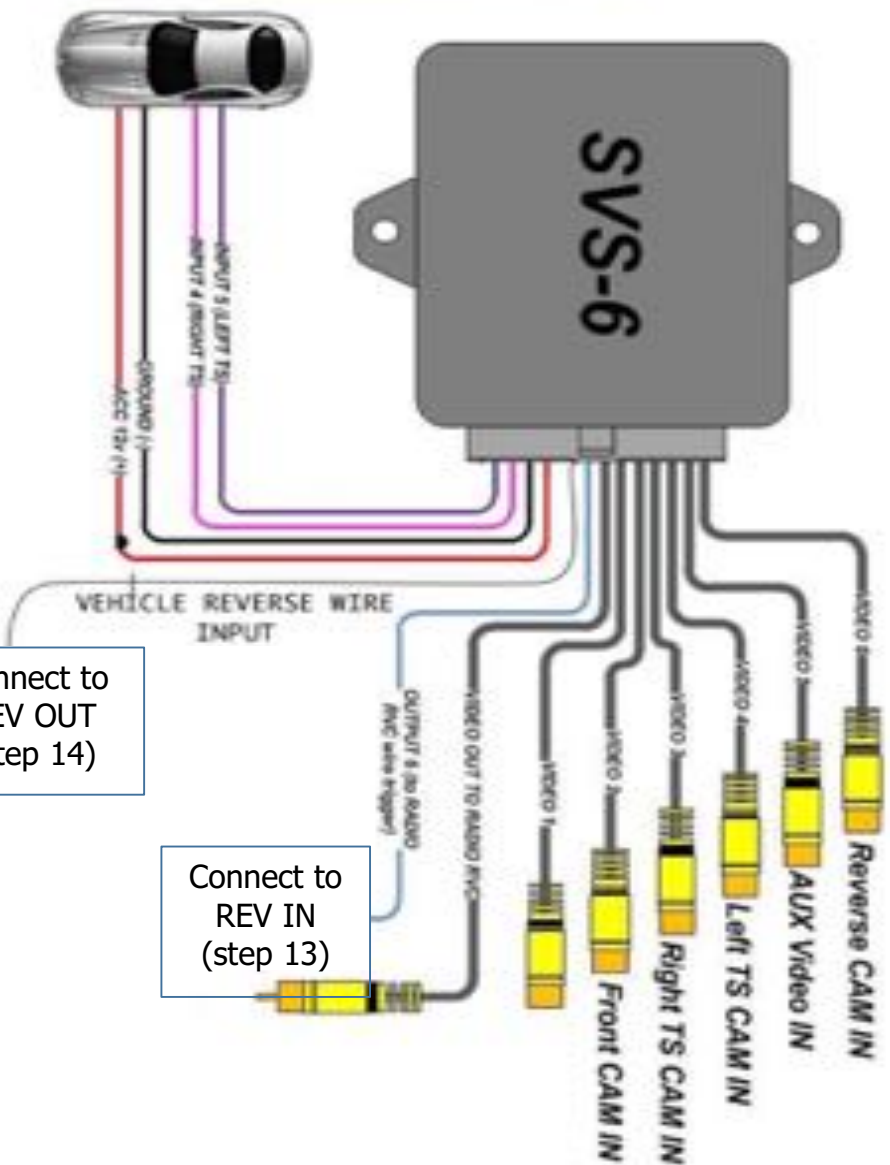
TERMINAL #2

28 TERMINAL CONNECTOR  
ON BACK OF RADIO



Connect to  
REV OUT  
(step 14)

Connect to  
REV IN  
(step 13)



**DIAGRAM #2**



TERMINAL #12 (POSITIVE VIDEO)

TERMINAL #24  
(NEGATIVE VIDEO)

24 TERMINAL CONNECTOR  
(RADIO SIDE)

CONNECT TO THE VIDEO  
OUT RCA OF THE 6-WAY  
SWITCHER



CONNECT TO THE  
REAR CAM RCA OF  
THE 6-WAY VIDEO  
SWITCHER

