ROSCO®

VisionSystems

Smart-Vision™ 4.3" Rearview Mirror/Monitor Combo

Backup Camera System

INSTALLATION/USER'S MANUAL

STSK4533 - With License Plate Camera

STSK4532 - With Bumper "Bullet" Camera

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Jamaica, NY 11435

1.800.227.2095
w.roscovision.com

STSK4533 Component List

Qty	P/N	Qty.
1	STSC112	BACK UP LICENSE PLATE CAMERA
1	STSM230	4.3" COLOR MIRROR MONITOR
1	STSW1000	WINDSHIELD MOUNT
1	STSH4530	MONITOR POWER HARNESS
1	STSH330	25' EXTENSION HARNESS
1	STSH373	CAMERA POWER
1	STSH374	SPLITTER HARNERR

Notes:
- Please read this manual carefully before using the product.
- This system is intended as an aid to safe reverse operation.
  Drivers must always use extreme caution when operating a vehicle.
- Specifications subject to change without prior notice.

Warning:
- To prevent electrical shock, DO NOT OPEN MONITOR CASE.
- Avoid exposing monitor to water, rain, moisture etc.
- Do not disassemble the camera. This voids the warranty.
  Disassembling the camera will compromise the waterproof seal.

STSK4532 Component List

Qty	P/N	Qty.
1	STSC106	BACK UP BULLET CAMERA
1	STSM231	4.3" COLOR MIRROR MONITOR
1	STSW1000	WINDSHIELD MOUNT
1	STSH4530	MONITOR POWER HARNESS
1	STSH330	25' EXTENSION HARNESS
1	STSH373	CAMERA POWER
1	STSH374	SPLITTER HARNESS

CONTENTS

Smart-Vision™ 4.3" Mirror/Monitor Combo Backup Camera System

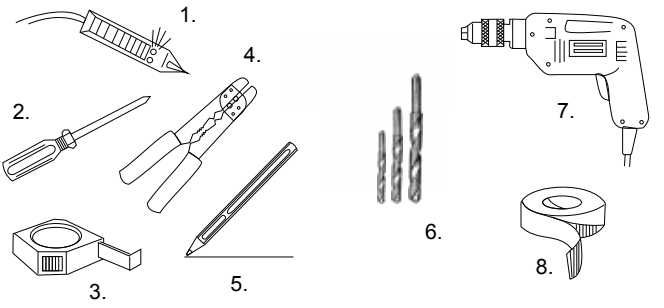
Rosco Vision Systems introduces a revolutionary new backup camera system for small to medium vehicles. Smart-Vision™ utilizes an interior rearview mirror to display a 4.3" LCD monitor when the vehicle shifts into reverse. This monitor allows the driver to see behind the vehicle for added convenience and safety while in reverse. At other times, the full area of the mirror-glass is reflective just like a standard interior mirror.

Rosco's rear view license plate camera gives the driver a 180 degree wide and clear views of what's behind the vehicle, allowing the driver to back up safely in all weather conditions. The convenient and simple design affixes over your existing rear license plate, permitting the camera to be installed on the existing license plate holes of the vehicle. Perfect for Mini Vans, SUV's, Sedans, pick-up trucks and more.

General Technical Specifications:

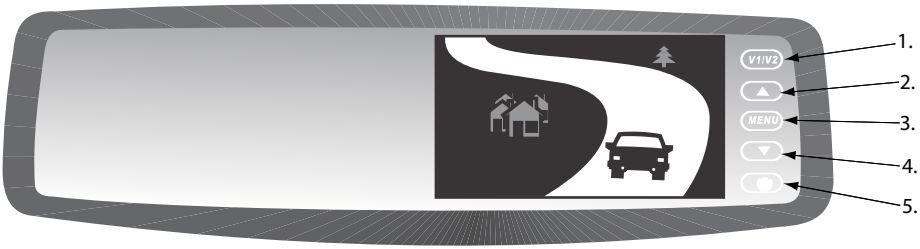
Power Supply:	12VDC
Power Consumption:	~3 Watt
Current Draw:	~250 mA
Video Input:	1 Vp-p@75 impedance
Monitor Dimensions:	11"W x 3"H x 1.5"D

Installation Tools:



1. Wire Tester
2. Phillips Screwdriver
3. Tape Measure
4. Wire Stripper
5. Pencil
6. Drill Bits
7. Drill
8. Tape
9. Wire Ties (Not Shown)

How To Operate Display



How To Operate Display:

1. V1/V2 - Not Applicable.
2. "Up" - Menu selection control.
3. Menu - Switches to setup menu.
4. "Down" - Menu selection control.
5. Power - Switches monitor off. Typically not used

How To Set Your Monitor:

On-screen menu commands may be selected pressing the MENU button while the mirror/monitor is on:

Brightness
Contrast
Saturation
Hue
Sharpness
4:3/16:9
Reset

Monitor Technical Specifications:

Screen:	4.3" TFT Color LCD
Brightness:	500cd/m^2
Contrast ratio:	300:1
Resolution:	480 x 272
Current Draw:	Max 120mA
Video format:	NTSC/PAL
Display format:	4 : 3 or 16 : 9
Power Supply:	12V
Working Temp. °F(°C):	-5° to 158° (-20° to 70°)

IMPORTANT: The Rearview Mirror/ Monitor is not intended to be used for prolonged periods of time. Therefore the monitor stays off until triggered by reverse circuit.

STSC112 License Plate Color Camera

Camera Technical Specifications:

Processor:	1/4" Sharp® CCD
Sync System:	Internal
Horizontal Resolution:	420TVL
Minimum Illumination:	0 Lux
Diagonal Angle:	180°
Video Output:	1.0Vp-p, 75ohm
Waterproof Grade:	IP69K
Current Draw:	Max. 120mA
Nominal Voltage:	DC12V

Features and Benefits:

- Superb Night Vision
- 180° Diagonal field of vision
- Easy installation
- 4 High Output IR Led's for Enhanced Night Vision

STSC106 Bumper Bullet Camera

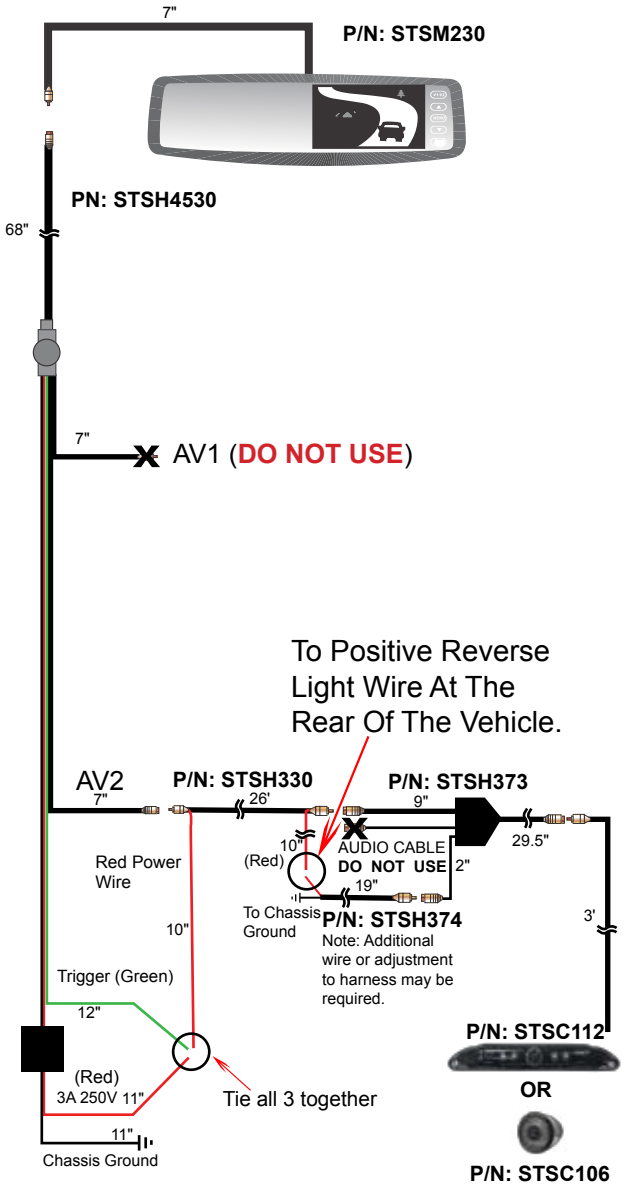
Camera Technical Specifications:

Processor:	1/4” Sharp CCD
Sync System:	Internal
Horizontal Resolution:	420TVL
Minimum Illumination:	0 Lux
Diagonal Angle:	180°
Video Output:	1.0Vp-p, 75ohm
Waterproof Grade:	IP69K
Current Draw:	Max. 120mA
Nominal Voltage:	DC12V

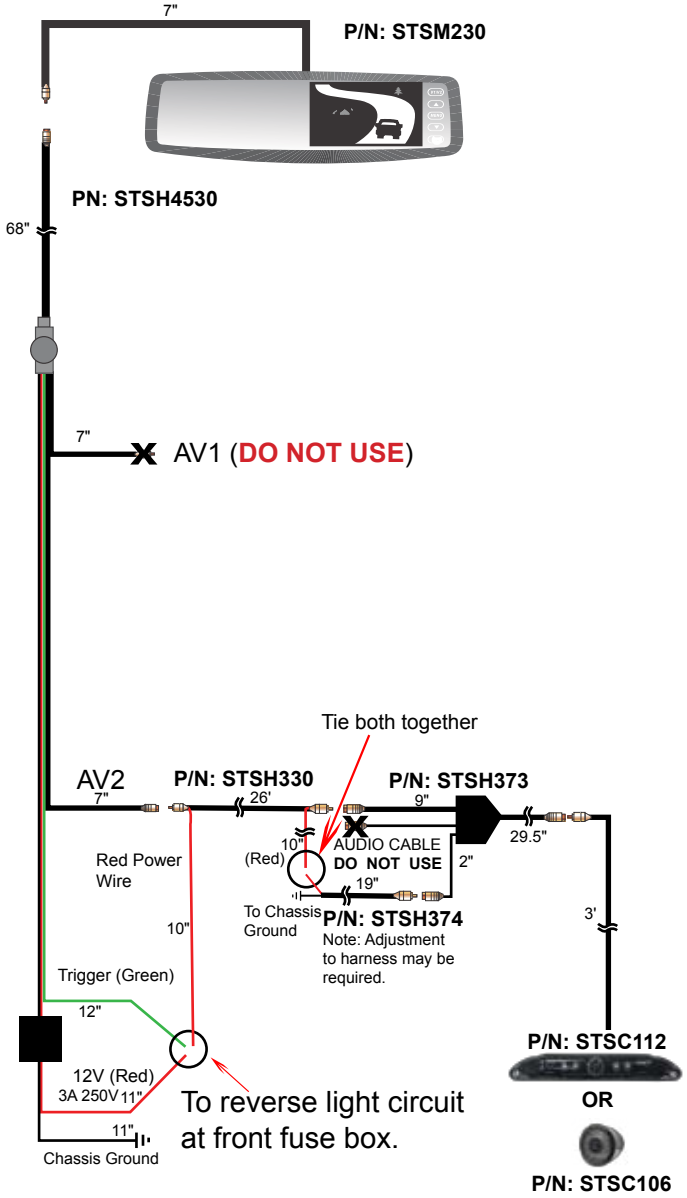
Features and Benefits:

- 6 High Output InfraRed LED’s for Enhanced Night Vision
- 180° Diagonal field of vision
- Easy installation

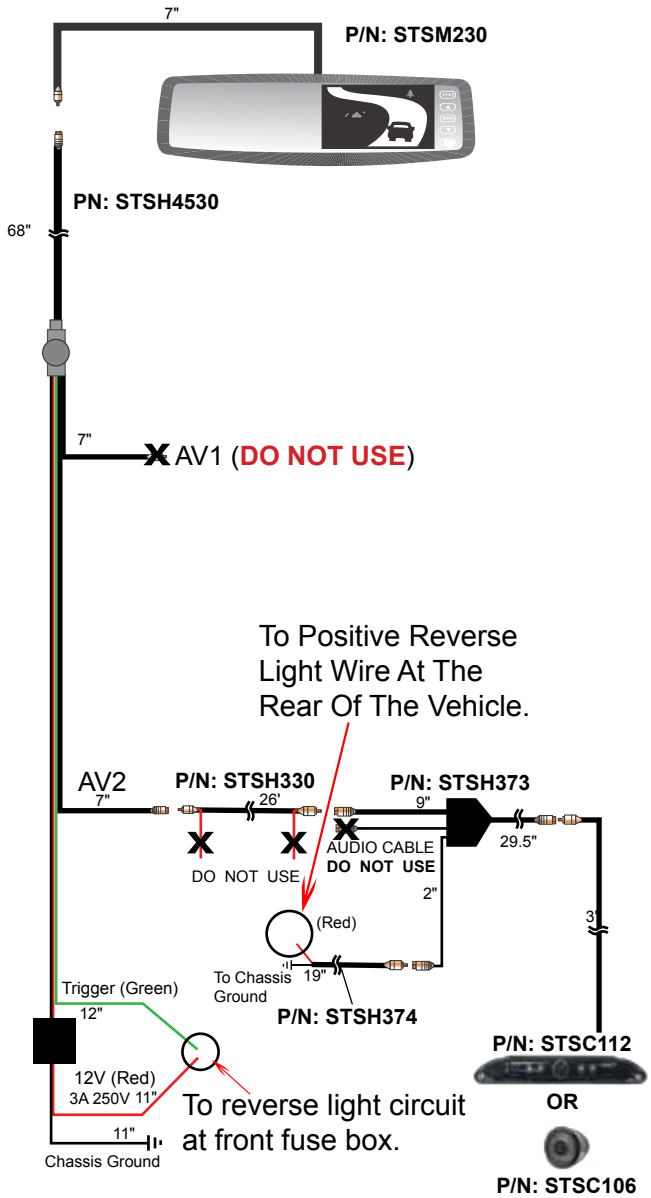
Option #1: Power Provided From Back of Vehicle (Most Common)



Option #2: Power Provided From Front of Vehicle



Option #3: Power Provided From Front and Back of Vehicle (Least Common)



STSC106 Camera Installation

1. Find a flat centered location on your bumper. (Figures 3a & 3b)

2. Make sure clearance behind camera location is unobstructed.

3. Using a 31mm (1.25”) hole saw (not included). Carefully drill a hole in the surface. (See Figure 4)

4. Remove retaining rings from camera and remove from harness.

5. Place harness through hole until camera is flush. Do not run the cable over sharp edges or corners. Do not kink the cable. Keep the cable away from hot and rotating parts. (See Figure 6)

6. Replace retaining rings onto body of camera. DO NOT TIGHTEN.

7. Connect camera to previously wired harness.(See Figure 5)

8. Tighten rings behind camera until completely snug (verify camera orientation by viewing image on monitor.)

9. Fasten all cable runs, and secure all excess cable.

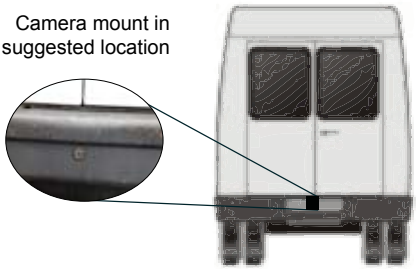


Figure. 3a

Figure. 3b

Figure. 4

Figure. 5

Figure. 6

STSC112 Camera Installation

1. Locate rear license plate and remove screws.

2. Find suitable location to drill connector hole above/behind license plate.

3. Once the location is chosen, drill pilot hole to the inside of the vehicle using a 5/16 drill bit. Be sure to clear any obstacles before drilling hole (See Figure 2).

4. Push connector through hole.

5. Mount camera on license plate and use provided screws to mount license plate back into position (See Figure 3).

6. Use supplied grommet to plug up drilled hole or use sealant to close and secure hole.

7. Connect camera to extension harness previously wired.

8. You have the option to change the camera angle. Two set screws located in the front of the camera may be loosened to adjust the camera angle. After the camera angle is adjusted just retighten the screws.

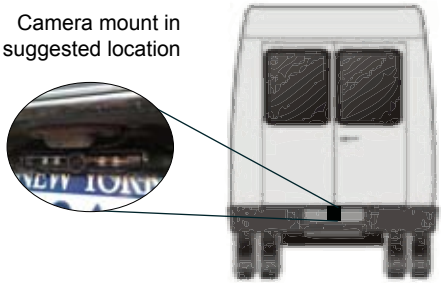


Figure. 1

Figure. 2

Figure. 3

Rearview Mirror Installation

For standard mirror monitor

1. Attach windshield mounting bracket to the back of STSM230 mirror/ monitor. Be certain that the monitor is in the upright position when attaching the mounting bracket. (Figure 1)

2. Remove old rearview mirror from factory mirror-mount tab.

3. Mount rearview mirror/monitor securely to mounting tab by tightening screw. (Figure 2)

4. Route the 8-pin connector end of the power harness to the location of mirror/monitor (preferably through the headliner and the vehicles A or B pillars).

5. Connect the power harness with the mating 8-pin receptacle end coming out of the mirror/monitor.

   IMPORTANT: Please be certain to match both guiding lines on each connector for a proper connection.

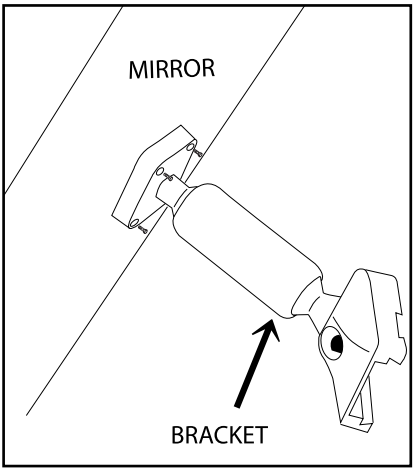


Figure. 1

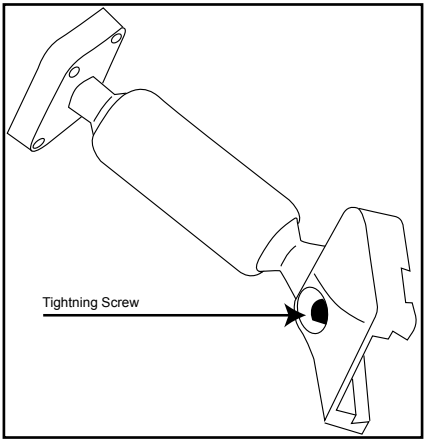


Figure. 2

Testing & Maintenance

How to Test:

1. Apply the parking brakes.

2. Turn Ignition on. (DO NOT TURN ON VEHICLE)

3. Shift into reverse gear.

4. Image should appear on the monitor.

Trouble Shooting:

Problem	Solution
No power to monitor while reversing.	Check power and reverse trigger connections.
"No Signal" appears while reversing.	1. Check video input connections. 2. Check camera power connections.
Video image is not sharp.	Check camera lens for debris.

Maintenance:

Always keep camera clear from dirt, snow, and mud. Clean camera with a soft moist cloth.

Testing & Maintenance

How to Test:

1. Apply the parking brakes.

2. Turn Ignition on. (DO NOT TURN ON VEHICLE)

3. Shift into reverse gear.

4. Image should appear on the monitor.

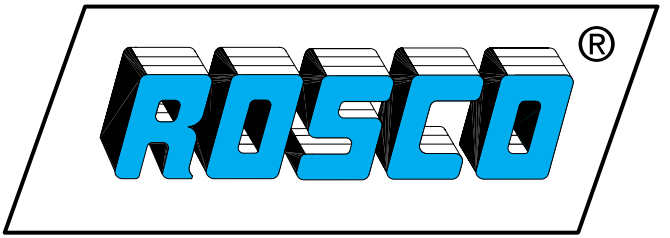
Trouble Shooting:

Problem	Solution
No power to monitor while reversing.	Check power and reverse trigger connections.
"No Signal" appears while reversing.	1. Press AV1/AV2 button to change video inputs. 2. Check video input connections. 3. Check camera power connections.
Video image is not sharp.	Check camera lens for debris.

Maintenance:

Always keep camera clear from dirt, snow, and mud. Clean camera with a soft moist cloth.

NOTES



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