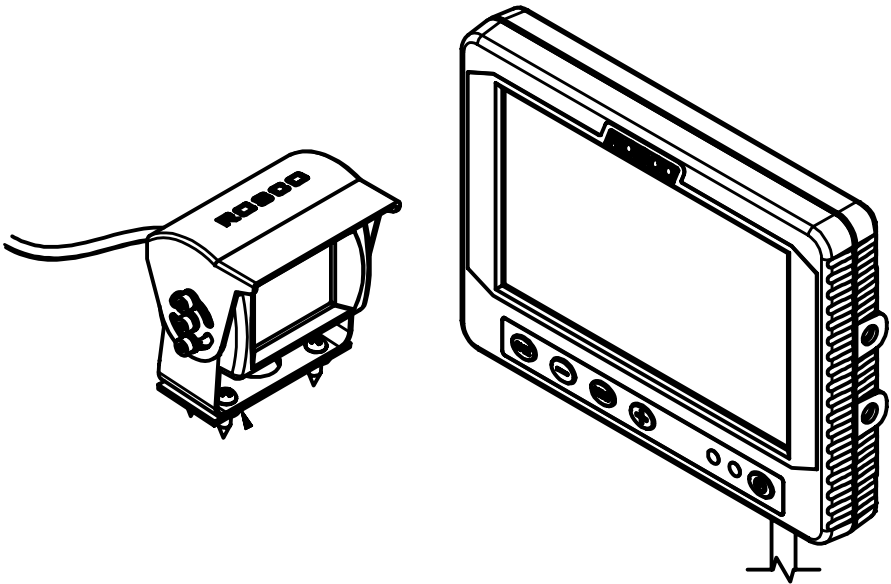




# SAFE-T-SCOPE®

BACKUP CAMERA SYSTEMS



**STSK5465**  
**5" MONITOR & CAMERA KIT**  
**INSTALLATION/USER'S MANUAL**

## TABLE OF CONTENTS

5" Color Backup Camera System. . . . . 2  
 Components List and description . . . . . 3  
 Camera Installation . . . . . 4  
 Monitor Installation . . . . . 5  
 Wiring Diagram . . . . . 6-7  
 Monitor Buttons . . . . . 8  
 Menu Settings . . . . . 9  
 System Technical Specifications . . . . . 10

## 5" COLOR BACKUP CAMERA SYSTEM

Rosco Vision Systems introduces a revolutionary new backup camera system for commercial vehicles. The backup camera system utilizes a 5" inch monitor to display a 16:9 LCD screen when the vehicle shifts into reverse. This monitor allows the driver to see obstructions behind the vehicle for added convenience and safety.

The camera has an advanced CCD image sensor able to process excellent views under dark and light conditions. A 120° diagonal field of vision yields superb coverage behind the vehicle, and complies with the latest U.S. DOT guidelines when installed properly.

### DISCLAIMER

The use of the STSK5465 Vehicle CCTV system should not in any way be used as a substitute for careful and cautious driving. Always obey traffic laws and motor safety regulations must always be adhered to.

Specifications subject to change without any notice.

## COMPONENT LIST AND DESCRIPTION

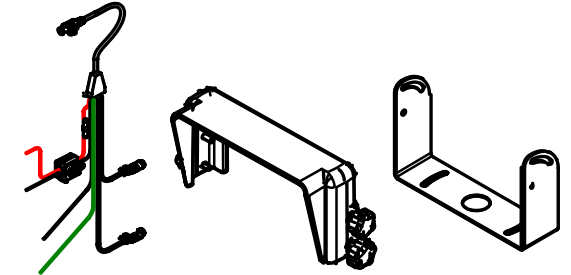
PART NO.	DESCRIPTION
----------	-------------

### STSM208

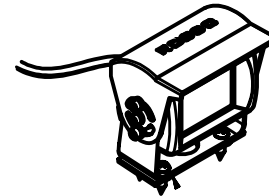


5" MONITOR KIT

**INCLUDES:** STSM214/PHAR POWER HARNESS    STSA1004 MONITOR SUN SHADE KIT    STSU1004 U-BRACKET (NOT INCLUDED)



### STSC141



REARVIEW CAMERA

### STSH214



4-PIN 26FT. EXTENSION CABLE

## CAMERA KIT INSTALLATION

### CAMERA LOCATION

- Select a high and centered location at the rear of the vehicle to mount the STSC141 camera. See Figure 1 & 2.
- Mounting the camera near the lower area of the vehicle (e.g. the bumper) is not recommended. This reduces the view of the camera and increases the chance of physical damage to the camera.

### INSTALL MOUNTING BRACKET

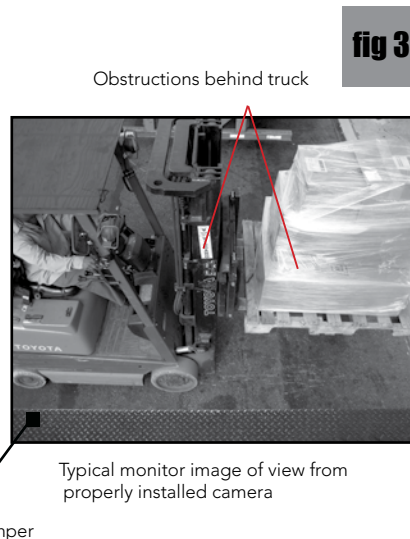
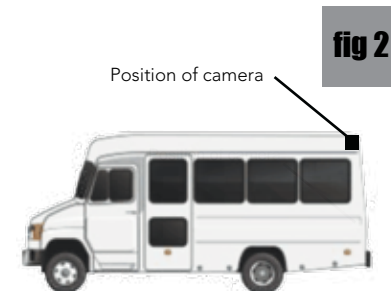
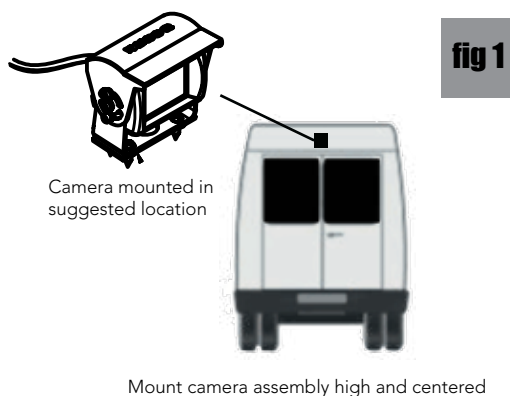
- Once the location for the camera is chosen, use a 3/16" drill bit to drill four holes into the vehicle using the mounting bracket as a guide. Be sure to clear any obstacles before drilling holes.
- Using a 3/4" drill bit, drill a cable hole into the vehicle using the large center hole in the mounting bracket as a guide, or choose a hole location as close as possible to the camera.

### INSTALL CAMERA

- Install the camera mounting bracket. Mount the camera and sunshade onto the bracket. Insert the camera cable into the vehicle through the 3/4" hole and install the cable grommet on the hole.
- Connect the camera cable to the male-pinned connector of the camera extension cable (STSH214). Hand-tighten the coupling ring on the camera cable to ensure a secure connection, and slide the environmental boot over the connection.

### ROUTE EXTENSION CABLE

- Route the extension cable to the vehicle cabin at the front of the vehicle. Adhere to a minimum bend radius of 2", and keep the cable away from hot, rotating, or electrically noisy components.
- Tuck the cable out of sight and secure/clamp the cable at as many spots as possible to prevent accidental snagging or damage to the cable.



## MONITOR KIT INSTALLATION

### MONITOR INSTALLATION

- Find a mounting location inside the vehicle cabin that is convenient to the driver (e.g. center of the dashboard, above the windshield on the ceiling, near the rear view mirror etc).
- Install U-Bracket as desired
- Attach the sunshade
- Using the 4 supplied thumb screws, attach the monitor/sunshade assembly to the U-Bracket

### FINALIZING THE INSTALLATION

- Connect the monitor 13-pin connector to the power harness 13-pin connector.
- Connect the camera extension cable from the rear-view camera to the 4-pin connector on the power harness. Slide the environmental sleeve of the extension over the connection.
- Tuck and fasten/clamp the power harness and extension cable as much as possible into the vehicle under the dashboard/pillar liners/etc to be out of sight from the driver and passengers. This reduces the possibility of the cables being hooked or snagged. Keep cables away from HOT, ROTATING and ELECTRICALLY NOISY components.
- Adhere to a 2-inch bend radius for all cables to prevent damage.
- Connect the 3- Pin connection to vehicle source

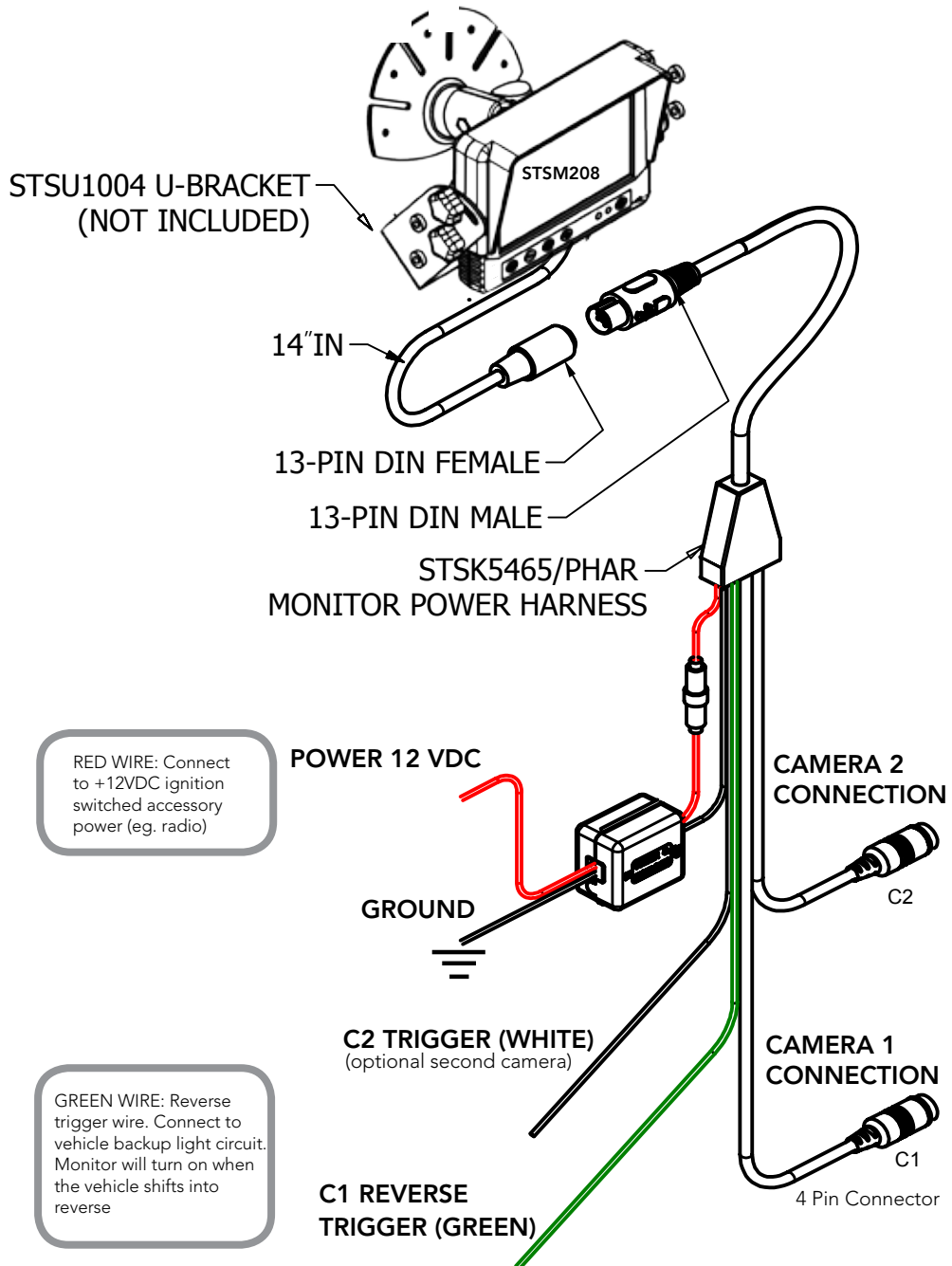
### FUEL TANKERS & OTHER SPECIALTY VEHICLES:

- All electrical equipment fitted to petroleum vehicles must be connected via battery master switch and must be isolated from the battery while the vehicles are loading and unloading. For other specialty vehicles, please check applicable code and regulations prior to installation.
- Always consult your dealer when fitting any electrical or electronic equipment to a vehicle fitted with a CAN-bus multiplex system.

### CHECK THE REAR VIEW IMAGE

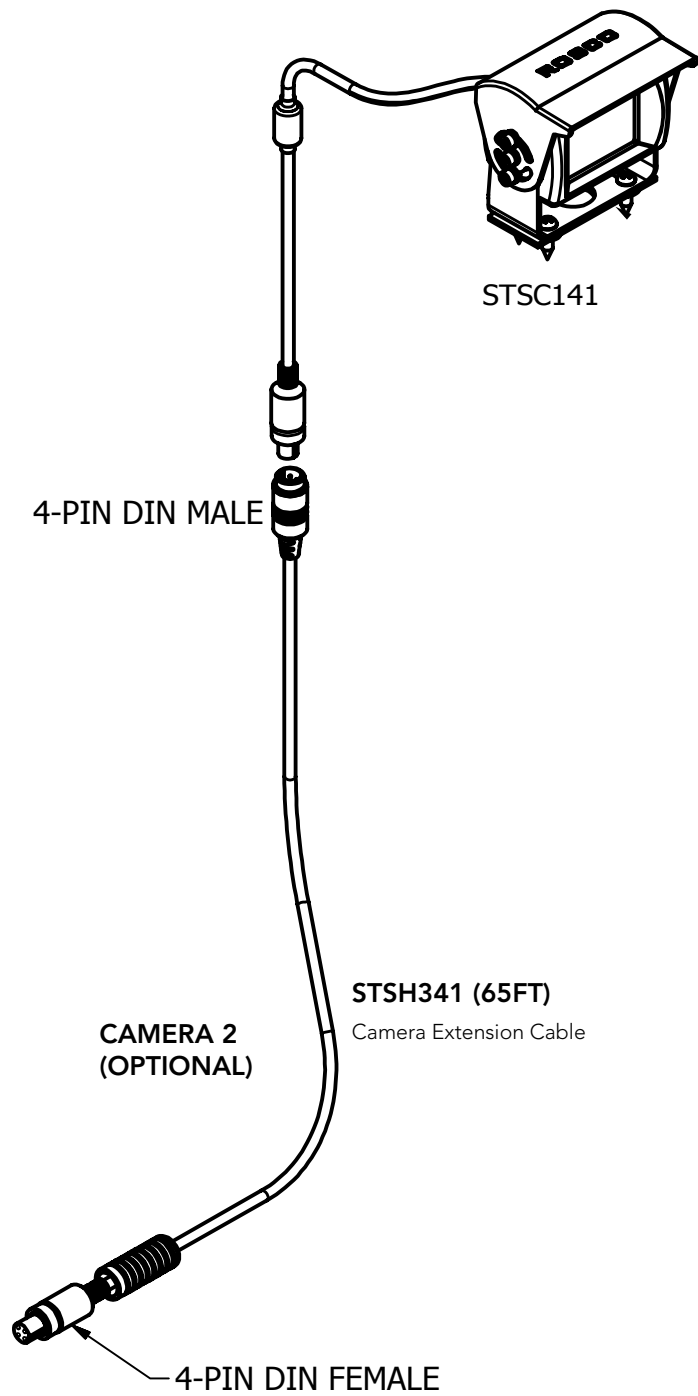
- Apply the parking brake and start the vehicle. Shift into reverse to ensure the monitor powers on and displays a rear image. Shift back into park/neutral and power off the vehicle.
- Adjust the angle camera as needed to achieve the desired rear view image. It is highly recommended that the image transmitted by the camera shows the rear bumper and area behind the vehicle. See Figure 3.

# STSK5465 Wiring Diagram



RED WIRE: Connect to +12VDC ignition switched accessory power (eg. radio)

GREEN WIRE: Reverse trigger wire. Connect to vehicle backup light circuit. Monitor will turn on when the vehicle shifts into reverse



## MONITOR BUTTONS

**i** **NOTE:** The monitor buttons do not function while the vehicle is in reverse. The vehicle must be running and in park/neutral/drive to use the buttons. It is recommended that the buttons are **ONLY** used in park/neutral.



### POWER ON/OFF

Powers on the monitor and displays the Camera 1 channel by default.



### LIGHT SENSOR (LEFT)

Used to adjust screen brightness automatically.

### POWER LED (RIGHT)

Green when ON, Red when OFF



### +/- VOLUME/MENU SETTING ADJUST BUTTONS

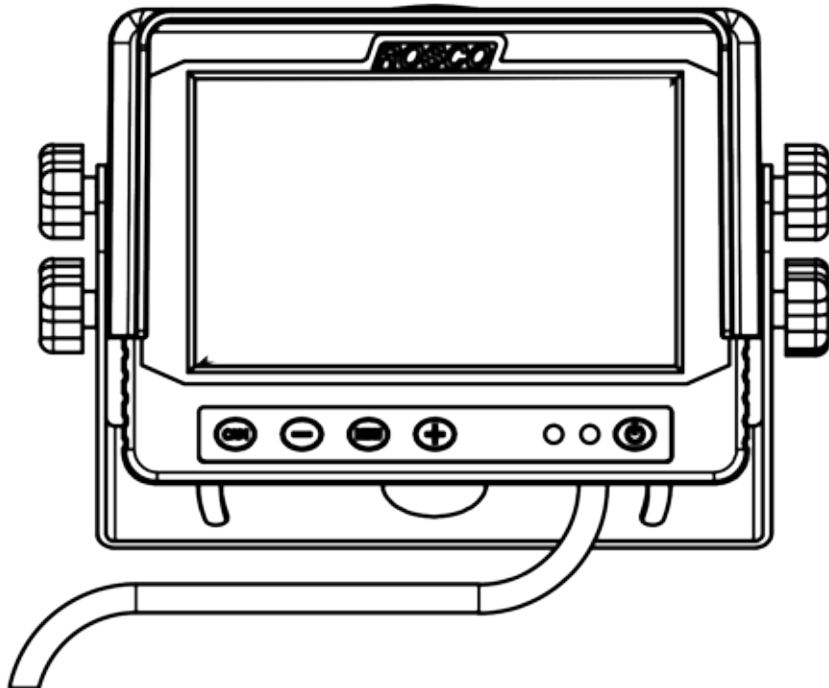
Adjusts the monitor sound volume by default.

Adjusts menu settings (e.g. brightness, contrast) according the menu setting selected



### MENU SETTING AND PAGE TOGGLE

Brings up the monitor settings menu. Press the button again to scroll through the various settings and to access the camera settings menu page (see following page).



**i** **NOTE:** The monitor buttons do not function while the vehicle is in reverse. The settings can only be adjusted when the vehicle is running in park/neutral/drive. It is recommended that the buttons are **ONLY** used in park/neutral.

MENU SETTINGS PAGE 1:

"MONITOR DIM MODE SETTINGS / MONITOR BRIGHT MODE SETTINGS"

Press the menu button (see preceding page) to access this menu. Press the menu button again to scroll through the settings:

- **BRIGHTNESS** Press +/- to adjust the brightness.
- **CONTRAST** Press +/- to adjust the contrast
- **COLOR** Press +/- to adjust the color saturation
- **TINT** Press +/- to adjust the color tint/hue.
- **LANGUAGE** Press +/- to select the menu language.
- **RESET** Press either + or - to reset all menu settings to factory default.

MENU SETTINGS PAGE 2:

"CAMERA SETTINGS"

Keep pressing the menu button to access page 2 of the settings:

- **CAM - HORIZONTAL** Press +/- to flip the Camera image horizontally.
- **CAM - VERTICAL** Press +/- to flip the Camera image vertically.
- **DIMMING** Press +/- to choose between "bright", "dim" and "auto". Choosing auto will allow the monitor to brighten and dim according to the amount of ambient light in the cabin.
- **SCALE** Press +/- to toggle the scale grid ON or OFF. If ON, the scale grid will appear when the driver shifts the vehicle into reverse in order to assist with distance perception.
- **ADJUST SCALE** Press + or - to begin adjusting the dimensions of the scale grid. Press - to switch between the vertical features of the scale and the horizontal "rungs". Press + to change the width, height, etc of the various features. Press MENU to save the settings and exit. See figure 4 for an example of the scale grid.



fig 4

**STSM208 Monitor: (Includes STSK5465/PHAR, BAS4560, STSDF1000)**

Screen size (diagonal):	5"
Maximum No. of cameras:	2 Inputs/Channels
Screen ratio:	16:9
Contrast ratio:	500:1
Video Input:	Composite, 1 V p-p +/- 20% @75 Ohms
Video system:	NTSC
Voltage input:	12 ~ 32 Vdc
Operating temperature °F (C°):	5°F to 149°F (-15°C to +65°C)
Storage temperature:	-4°F to +158°F (-20°C to + 70°C)
Shock rating:	8g
Vibration Rating:	6.9G @ 3mm amplitude & 10-30 Hz
Speaker Impedance:	8 Ohms
Weight:	0.66 lbs
Dimensions W x H x D:	5.47" x 4.05" x 1.09"

**STSC141 Camera: ( Includes Sunshade and Mounting Hardware)**

Image device:	Sony ¼" CCD
Pixels:	270,000
TV lines:	420
InfraRed LED's:	18 High-Output
Minimum illumination:	0 Lux (infrared LED's on)
Night vision range:	30 feet
Video Output:	1.0 Vp-p, 75 Ohm
Shock rating:	100G
Vibration rating:	15G
Field of view:	120°
Operating temperature °F (°C):	-4°F to +140°F (-20°C to + 60°C)
Storage temperature °F (°C):	-40°F to +176°F (-40°C to + 80°C)
Weight:	0.6 lbs.
Dimensions W x H x D:	3" x 2" x 2"

**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.

**STSH341 Extension Harness: (Included in Kit)**

65' Heavy Duty w/ Twist - Lock Connectors

**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.
- Keep all cables AWAY from rotating and electrically noisy components.
- Make sure all cables are fastened properly so that you can prevent wire chafing, kinks, cuts, etc...
- Always consult your dealer when fitting any electrical or electronic equipment to a vehicle fitted with a CAN-bus or multiple system.

# NOTES



***A CENTURY OF AUTOMOTIVE VISION SAFETY***

90-21 144th Place, Jamaica, New York 11435

TEL (800) 227-2095 • FAX (718) 297-0323

techsupport@roscovision.com

**[www.roscomirrors.com](http://www.roscomirrors.com)   [www.roscovision.com](http://www.roscovision.com)**

**RoHS FC**

M080816F