

CAMSET5A --- VERSION II

OWNER'S MANUAL

CAR REAR VIEW SYSTEM



velleman®

## CAR REAR VIEW SYSTEM

The camera included is designed for use with the monitor supplied and is not suitable for connection to any other monitor.

The monitor can be hooked up to two cameras. For optional camera, contact your local dealer.

**Please read before installing this system.**

## KITS CONTENTS



1. 5" black and white car rear view monitor
2. Water proofed camera with built-in microphone and 1.8m (female plug)
3. 20m cable with male/male plug.
4. Sun shield plastic.
5. Mounting bracket for monitor and 4 fixing screws.
6. 4-pin power plug with lead wire.
7. Cable clip and 2 screws.



## CAUTION



**RISK OF ELECTRIC SHOCK DO NOT OPEN**

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**TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL**



The lightning flash with arrowhead symbol, within and equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## SAFETY INSTRUCTION

Before using this unit please read these operating instructions carefully. Take special care to follow the warnings indicated on the unit itself as well as the safety suggestions listed below. Keep them handy for future reference.

1. Power source - The unit should be connected to power supply only of the type described in the operating instructions or as marked on the unit.
2. Water and Moisture - Do not use this unit near water.
3. Heat - Do not install the unit near heat sources such as radiators, stoves, heat registers, or other appliances that produce heat.
4. Ventilation - The unit should be situated so that its location or position does not interfere with its proper ventilation.
5. Foreign Material - Care should be taken so that objects do not fall into and liquids or not spilled into the unit.
6. Surface - Place the unit on a flat, level surface.

7. Damage Requiring Service - The unit should be serviced by qualified service personnel when :
  - The power cord or the plug has been damaged.
  - Objects have fallen or liquid has been spilled into the unit.
  - The unit has been exposed to rain.
  - The unit does not appear to operate normally or exhibits a marked change in performance.
  - The unit has been dropped or the enclosure is damaged.
8. Replacement Parts - Use only manufacturer specified parts. Unauthorised substitutions may result in fire, electric shock or other hazards.
9. Service - The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to an authorised service personnel.

**Warning :** The said Rear Observation Systems are to be used with, not instead of, other viewing aids in your vehicle such as front, rear, and side mirrors. Safe driving practices, alertness, and visual and physical fitness are prerequisites for your driving safety. The Manufacturer shall not be held liable for any accidents which may occur while operating this system.

## INTRODUCTION AND FEATURES

This Hi-sharp Rear view system can lighten your worries on backing and parking your car or truck. See and hear what's behind you and drive with confidence.

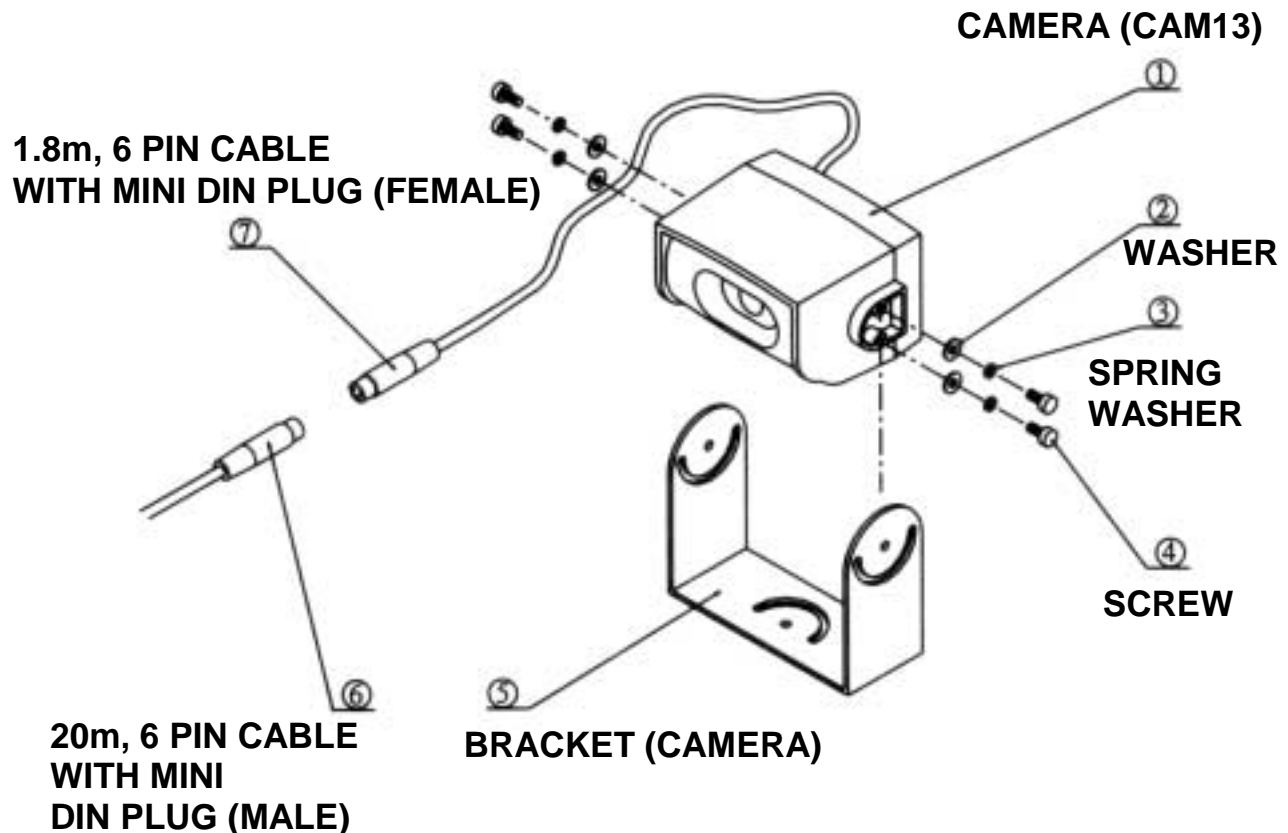
### Monitor :

- ▶ Dual camera input
- ▶ High Resolution - 500 TV lines
- ▶ Built-in speaker
- ▶ Free voltage from DC 12V to 24V
- ▶ Can be automatically activated when vehicle is shifted into reverse

### Camera :

- ▶ With board lens for maximum viewing angle
- ▶ High resolution with 380 TV lines
- ▶ Water proofed case
- ▶ Built-in microphone
- ▶ Low light sensitivity - 0.1 lux

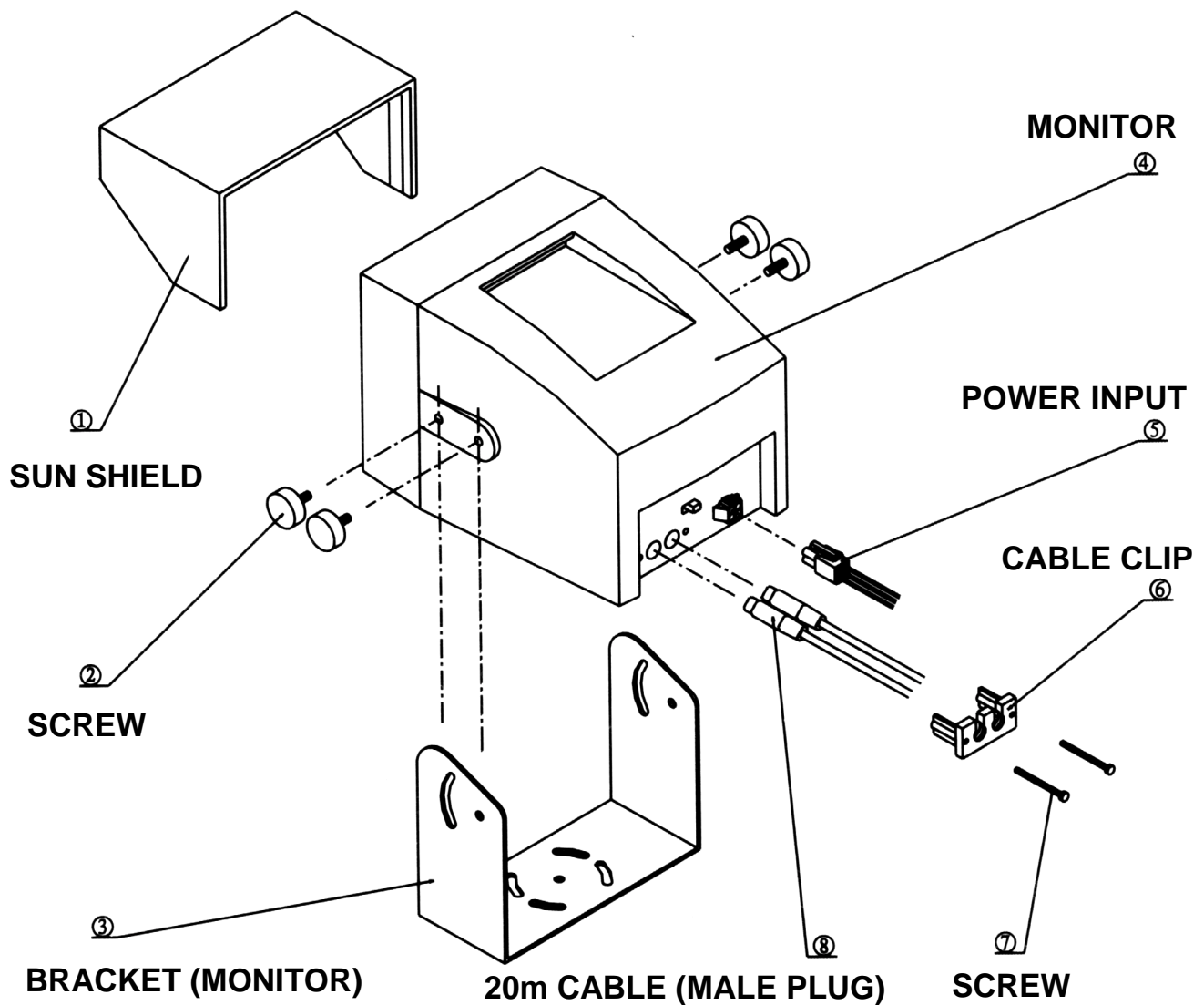
# CAMERA INSTALLATION



1. At camera mounting position, fit the camera mounting bracket ⑤ to this position using the screws to the centre hole and slide hole.
2. Turn the bracket left and right to a correct direction and then tighten the screws.
3. Fit the camera to the bracket using the supplied washers ②, spring washers ③ and screws ④.
4. Rotate the camera up and down to a position that you can see the picture you want clearly and then tighten the screws ④.
5. Drill a cable entry hole through the wall or a door or a window frame just below the mounting bracket.
6. Pull the cable fully through the hole. Inside the protected property, attach the extension cable to the cable from the camera. Run the extension cable to the monitor position.

## MONITOR INSTALLATION

1. At the monitor mounting position, placing the monitor mounting bracket ③ and screw into the centre hole and slid holes. Adjusting the bracket by turning it left and right to let the monitor face to you directly. Then tightening the bracket.
2. Mounting the monitor onto the bracket by using the screws ②. Moving the monitor up and down to a proper position and fixing the screws.
3. If necessary sticking the Sun shield ① onto the top side of the monitor.



## CONNECTION TO MONITOR

**IMPORTANT : Do not connect any camera to the monitor while monitor is switched on.**

1. Plug the camera into the camera input DIN sockets marked A and B at the back of the monitor.

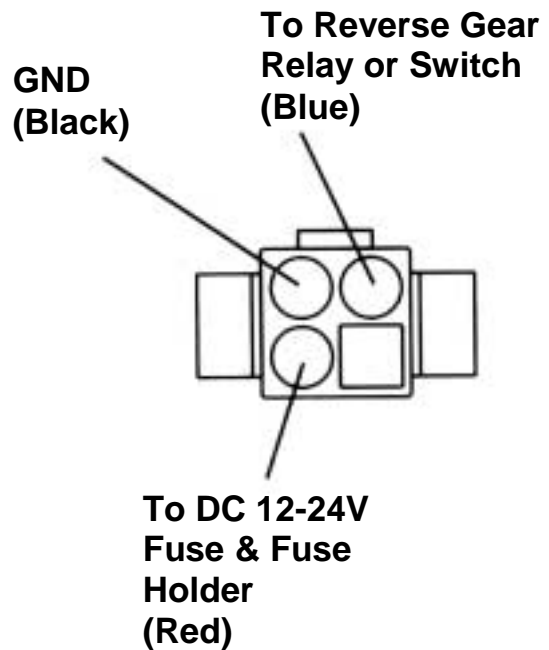
**Ensure that the arrow on the camera plug is at the top before inserting the plug into the input sockets.**

2. Clipping the cables using the applied cable clip and screw the cable clip into the holes just beside the DIN sockets on the back of the monitor.

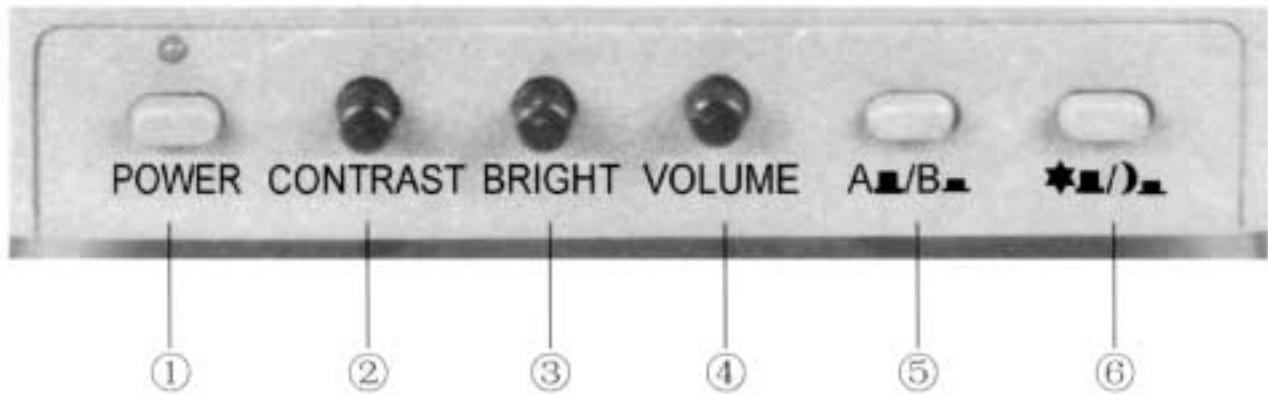
3. Plug the power plug into into the socket marked **DC 12-24V** at the back of the monitor.

The connection of the power plug is shown right.

Note that the Red wire with fuse holder should be connected to car or truck battery, and Blue wire to reverse gear relay, Black wire to chassis ground.



## FUNCTION DESCRIPTION



- ① **Power-on switch**  
Push this button you can view the picture. Normally leave it unpushed when the monitor is used in backing a truck or a car. When you shift the gear in reverse, the unit will automatically display the picture of camera A no matter the power is on or off.
- ② **Contrast control**  
Normally, it is not necessary to touch this control. When needed, turn it clockwise to increase the contrast and vice versa.
- ③ **Brightness control**  
Normally, it is not necessary to touch this control. When needed, turn it clockwise to increase the contrast and vice versa.
- ④ **Volume control**  
When needed, turn it clockwise to increase the volume.
- ⑤ **A/B Camera switcher**  
This switch permits switching between picture viewed from camera A en camera B.
- ⑥ **Day/night switch**  
This switch permits brightness compensation during daylight. Unpush it when the monitor is used in the day and leave it pushed at night.
- ⑦ **A/B Camera picture signal input**  
One or both of the camera input connectors can be chosen to connect cables from cameras. Please note that through these connectors the needed DC power can be sent to the cameras.

- ⑧ Normal image / Mirror image Select Switch  
Please note that this switch has been set to mirror (Rev. Image) position by manufacturer. When you want to view from behind while you are backing a truck car, be sure to set this select switch to the (Rev. Image) position. In this case, check to see if the image appearing on the display is reversed right to left, just as it appears on a rear-view mirror.



Rear view of monitor showing input/output connections.

## SPECIFICATIONS

MONITOR CAMSET5A		
Scanning frequency	Horizontal Vertical	15625Hz -CCIR- 50Hz -CCIR-
Video input		1Vpp / 75Ω
Size of display		5" CRT
Scanning size		86% min. (horizontal)
Resolution at centre		500 lines
Shock		6.8G
Vibration		0 to 2000Hz
Input voltage		DC 12-24V
Case		ABS plastic
Operating temperature		0 to +40°C
Dimensions		143 x 190 x 136mm
CAMERA CAM13		
Pick-up device		1/3" CCD
Scanning system		625 lines -CCIR-
Number of pixels		512 x 582 pixels
Fixed focus lens		F3.6mm , F2.0, open diagonal 130°
Horiz. resolution		380 lines
Video output		1Vpp 75Ω
Min. light illumination		0.3lux
Shock		6.8G
Vibration		0-2000Hz
Input voltage range		DC 9.5-14V
Case		zinc based
Operating temperature		-10 to +50°C
Dimensions (with mounting bracket)		80 x 65 x 55mm
Optional extra camera		CAM13