

VEHICLE CCTV SYSTEM

Model:

VBV-545AM MONITOR

VBV-100C CAMERA



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VALUE

TECHNICAL SPECIFICATION OF MONITOR AND CAMERA

SPECIFICATIONS

VBV-100C CAMERA

VIDEO PICK-UP DEVICE	CCD
IMAGE SIZE	1/3 inch
SYNCHRONIZATION	INTERNAL
REQUIRED ILLUMINATION	0 Lux MINIMUM
VIDEO OUTPUT	1V (p-p), 75 ohm
OPERATING VOLTAGE	12 Vdc
POWER CONSUMPTION	MAX 2.4W(AT 12 Vdc)
RESOLUTION	420 TV LINES
OPERATION TEMP	-10°C TO +45°C
WEIGHT	0.2Kg
DIMENSION (W x H x D)mm	70 x 44 x 54

VBV-545AM MONITOR

VIDEO SYSTEM	CCIR
PICTURE TUBE	4.5" CRT
PICTURE RESOLUTION	600 TV LINES
POWER CONSUMPTION	11W
OPERATION VOLTAGE	DC 12V – DC 32V
WEIGHT APPROX.	3.2KG
DIMENSION (W x H x D)mm	160 x 127 x 117 (without bracket)



SAFETY INFORMATION

Before installing the unit, please read all the CAUTIONS and WARNINGS below.

INTRODUCTION

This vehicle CCTV system has been designed to provide years of trouble-free operation. Please read this manual thoroughly. This manual contains instructions to make the installation of the camera and monitor easier. The vehicle CCTV system is a supplement to standard rear-view mirror systems, and will provide additional rear-view vision when installed and maintained properly. It is not intended in any way to be a substitute for careful and cautious driving. All applicable traffic laws and motor safety regulations must still be adhered to.

BEFORE INSTALLATION

1. This system operates from 12 volts DC to 32 volts DC, negative ground.
2. Please install this system according to the instructions in this manual.
3. Do not disassemble the camera or the monitor. This voids the warranty. Disassembling the camera will compromise the waterproof seal.
4. Connect the system to an ignition switched power source. Connection to a battery source will reduce battery life.

MAINTENANCE

Remove dust and dirt with a damp soft cloth. Heavier dirt should be removed with a damp soft cloth and mild detergent. Do not use strong cleaning agents containing gasoline, thinner, benzene or alcohol. These substances may damage the exterior surface of the monitor.

WARNING

1. To prevent electrical shock, DO NOT OPEN THE MONITOR CASE. There are potentially lethal voltages inside the monitor. There are no user serviceable parts inside. If evidence of tampering is detected, the warranty will be considered void.
2. Keep monitor away from leaking water, rain, moisture etc. It is NOT waterproof. Any moisture inside the monitor could cause extensive damage.
3. Use the thumbscrews to mount the monitor to bracket.
4. Do not cover air ducts. Monitor needs proper ventilation to prevent overheating.

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TROUBLESHOOTING

Solve problems according to the table below

Symptom	Cause	Solution
Rolling image	Monitor(horizontal control)	Replace monitor
Shrunk & Unstable image	Monitor improper voltage	check the voltage of power supply
Black image	Monitor improper voltage	if ok, check fuse->check power cable, wires or connector(loose or broken?) If all above item are ok, replace monitor
White image	Monitor/Camera	Check main system cable. Make sure all connectors are connected properly. If ok, check 4 pin DIN monitor cable. If ok, replace camera
Blurred image	Fog, mud, water or ice on camera lens or porthole moisture in camera	Clean camera porthole. If condensation or moisture is visible inside camera, initiate device immediately.
Engine noise or Static lines	Monitor	Make sure ground and +12V DC source is in solid connection. Call tech-support for assistance
No light displayed on monitor	Broken fuse or low brightness level	Check whether the fuse is broken or brightness adjustment has been turned to the lowest level
No image	Improper plugging in connector or broken system connecting cable	plug the connector properly or replace the system connecting cable

If you still can not solve the problems, contact our tech-support engineer for assistance.

WARNING

Electrical shock or fire hazard. Do not try to service this unit yourself. Service should be handled by qualified technicians.

IDENTIFYING THE PARTS

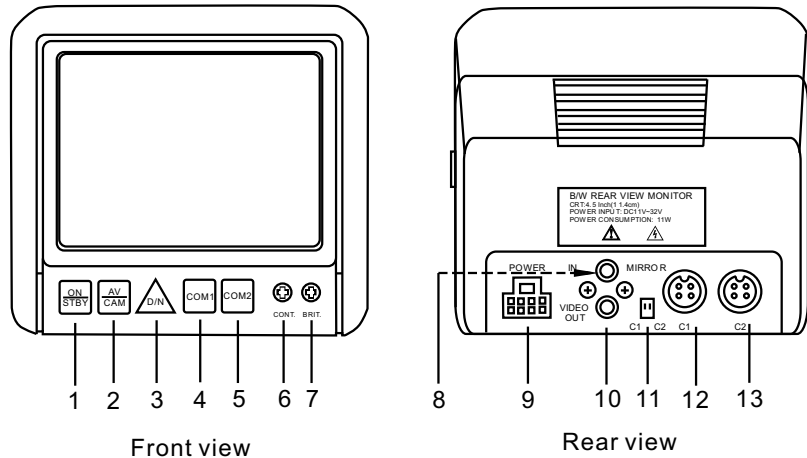
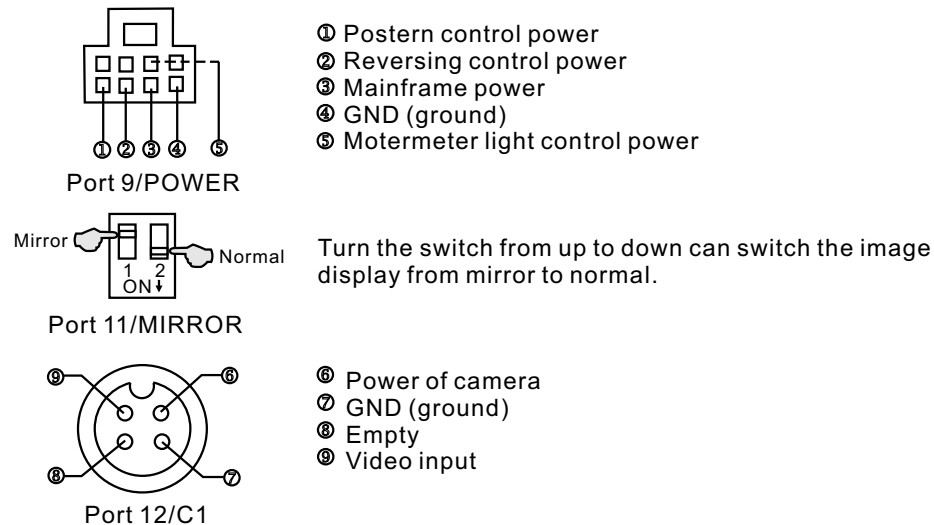


Fig. 8 Front and rear view of product

- | | |
|-------------------------------|--------------------------------|
| 1. Power / Stand-by switch | 8. Video input |
| 2. Camera/VCD switch | 9. Power input |
| 3. Day/Night lightness option | 10. Video output |
| 4. Camera1 switch | 11. Normal/Mirror image switch |
| 5. Camera2 switch | 12. Camera input C1 |
| 6. Contrast adjustment | 13. Camera input C2 |
| 7. Brightness adjustment | |

Details of ports



SYSTEM COMPOSITION

Before using the product, please make sure that the package of product includes the following items.

Item	Quantity
Monitor	1
Camera	1
Monitor bracket	1
Bracket mounting screw(Monitor)	4
Power cable	1
Sun visor	1
Screen protecting board	1
Angle adjustment screw(Monitor)	4
System connecting cable	1
Plastic ear	2
Angle adjustment screw(Camera)	4
Operating instruction	1

Accessories

	Monitor bracket		Angle adjustment screw (Monitor)
	Power cable		Bracket mounting screw (Monitor)
	Sun visor		Screen protecting board
	System connecting cable		Plastic ear
	Angle adjustment screw (Camera)		

SYSTEM INSTALLATION GUIDE

VBV-100C CAMERA

1. Attach camera bracket (see Fig. 2) to upper portion of vehicle. Attachment point must be sturdy enough to support camera and bracket.
2. Attach camera to bracket using screws provided. (see Fig. 1) Adjust angle as indicated in Fig. 2. (Use rear bumper and back of vehicle as a reference point.)
3. Wind deflector may be installed. This deflector is designed to reduce the build up of dust, dirt and moisture on the camera lens. (See Fig.1)

VBV-545AM MONITOR

1. Attach monitor inside vehicle in a location convenient to the driver (e.g. centre of dash, overhead or in dash) (Fig.4)
2. Use a compression plate to attach the monitor bracket to the dash or overhead.
3. Adjust mounting angle of the monitor to allow driver to easily view the screen from all seat positions. (Fig. 3)

CABLE

1. The camera to cable connection and the monitor pigtail are waterproof. Be sure to orient the cables properly.
2. Do not run the cable over sharp edges or corners. Do not kink the cable. Keep the cable away from hot and rotating parts.
3. Place all excess cable in convoluted tubing.
4. Wire the cable securely.

WIRING CAMERA AND MONITOR

1. See connection diagram for connections to ignition, ground and back up circuit. (See Fig. 6)
2. Wiring camera: Drill a 22mm diameter hole into vehicle body near the camera and bracket. Connect camera connector to extension cable in vehicle. Push extra cable into vehicle (be careful not to kink cable) and fit grommet into hole. Apply sealant around grommet to increase resistance to water penetration.
3. Wiring Monitor: Insert extension cable into camera #1 position. If 2 cameras are used, be sure to mark each extension cable properly and plug second cable into camera #2 position. Bundle excess cable together using a cable tie or vinyl tape. This will avoid possible damage to cable during operation.
4. The red wire is connected to an ignition power source, the black wire is connected to chassis ground, and the brown wire is connected to the vehicles back up circuit.

CAUTION

1. Before drilling, be sure no cable or wiring is on the other side. Be sure to drill a 22mm diameter hole only.
2. Feed as much cable as possible into vehicle and clamp securely. This reduces the possibility of it being hooked or snagged.
3. Keep all cables away from HOT, ROTATING and ELECTRICALLY NOISY components.
4. To increase protection of cable, place all excess wire and extension cable in convoluted tubing.
5. Do not twist camera cable and do not cut camera pigtail or cable.

IDENTIFYING THE PARTS

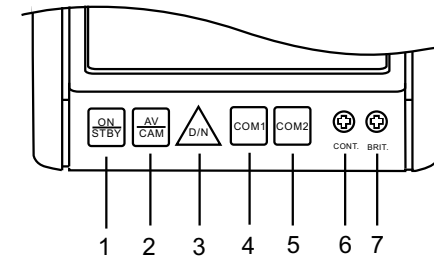


Fig.7 Panel indications

Panel instructions

1. ON/STBY button: Blue light indicates starting up, red light indicates mainframe is in stand-by mode.
2. AV/CAM button: Blue light indicates camera signal input, red light indicates VCD signal input.
3. D/N button: Blue light indicates night light mode, red light indicates day light mode.
4. COM1 button: Blue light indicates reversing camera signal input, red light indicates postern camera input.
5. COM2 button: Blue light indicates postern camera input, red light indicates reversing camera signal input.
6. CONT. button: To enhance contrast by clockwise rotation, to diminish it by anti-clockwise rotation.
7. BRIT. button: To enhance brightness by clockwise rotation, to diminish it by anti-clockwise rotation.

SYSTEM CONNECTION DISPLAY

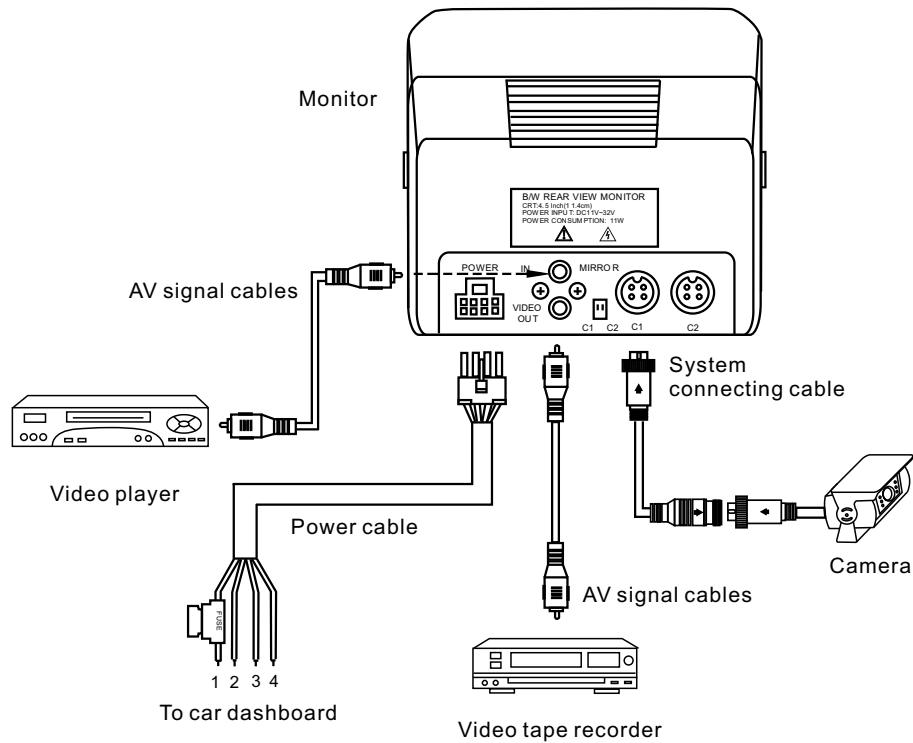


Fig.6 System connection

Power cable connection

1. Red to DC12V-32V power input
2. Brown to reversing control power
3. White to postern control power
4. Black to ground(GND)

This product can be linked to 2 channels of cameras and 1 channel of video input (VCD signal input) as well as 1 channel of video output which connect to a video tape recorder for recording images.

CAMERA MOUNTING

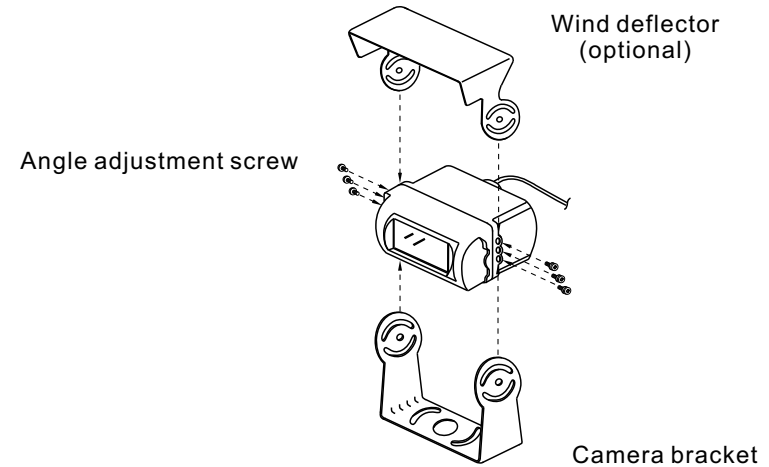
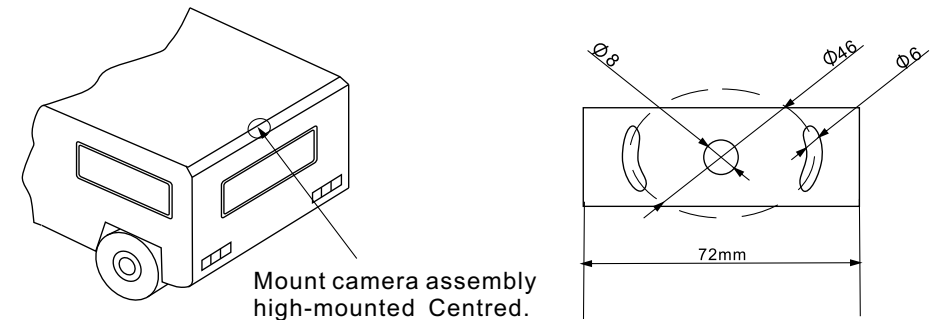
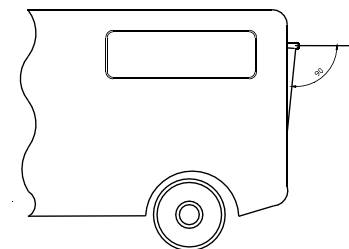


Fig.1 Mounting the bracket

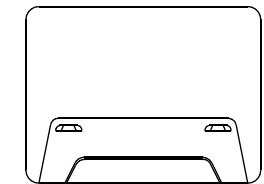


Mount camera assembly high-mounted Centred.

Camera mounting hole pattern.



Approximately 90-degree field of view



Back of vehicle, viewing at monitor screen

Fig.2 Attaching the camera to the vehicle

MONITOR MOUNTING

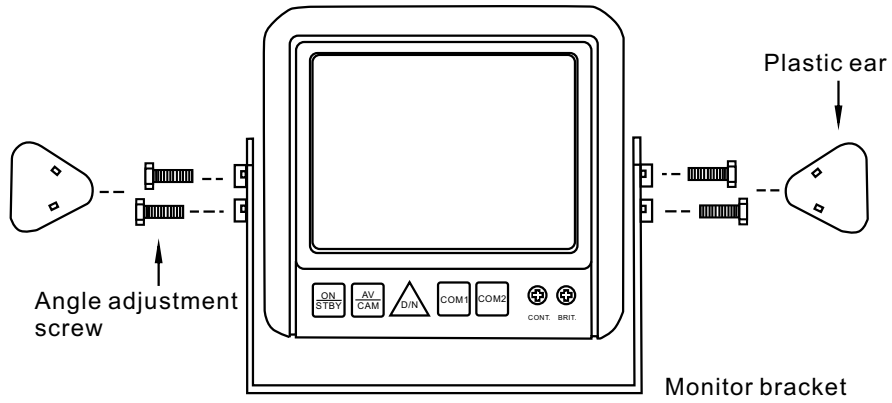


Fig.3 Mounting the bracket

MONITOR MOUNTING

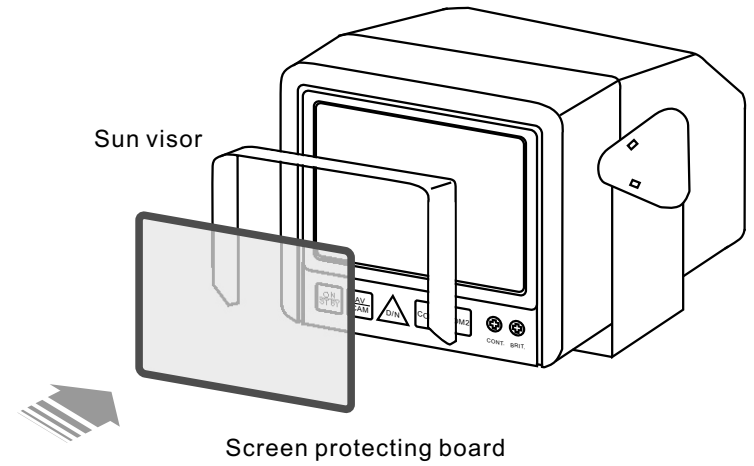


Fig.5 Screen protecting board and sun visor installation

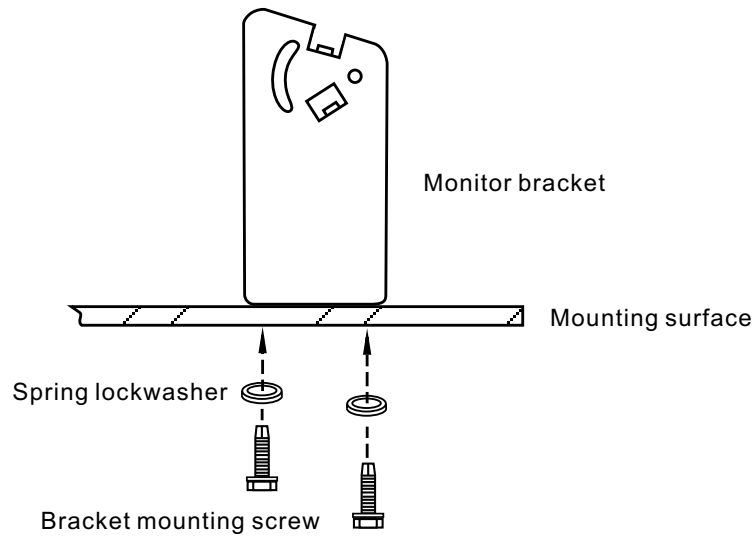


Fig.4 Attaching the monitor to the dash