



KV-CM40U

UNIVERSAL CAMERA WITH MULTIPLE MOUNTING OPTIONS

INSTRUCTION MANUAL

CAMERA UNIVERSELLE AVEC PLUSIEURS OPTIONS DE MONTAGE

MODE D'EMPLOI

CÁMARA UNIVERSAL CON OPCIONES MÚLTIPLES DE MONTAJE

MANUAL DE INSTRUCCIONES

JVCKENWOOD Corporation

Before Use/ Installation Procedure

IMPORTANT

Please read this manual carefully to ensure proper use before using this product. It is especially important that you read and observe **WARNING** and **CAUTION** in this manual. Please keep the manual in a safe and accessible place for future reference.

WARNING

To prevent injury or fire, take the following precautions:

- To prevent a short circuit, never put or leave any metallic objects (such as coins or metal tools) inside the unit.
- Installation and wiring of this product require specialist skill and experience. To assure your safety, please request a specialist technician to install the unit.
- When you make a hole to install the camera, check the location of pipes, tanks and wiring and avoid touching them. Otherwise it may cause the fire.
- When you make a hole with a drill, use goggles to protect your eyes.
- To avoid the danger of accidental ingestion, keep any small objects such as screws away from children. If you think it might have been swallowed, seek immediate medical attention.

CAUTION

To prevent damage to the product, take the following precautions:

- Make sure to ground the unit to a negative 12V DC power supply.
- When replacing a fuse, only use a new fuse with the prescribed rating. Using a fuse with the wrong rating may cause your unit to malfunction.
- Do not use your own screws. Use only the screws provided. If you use the wrong screws, you could damage the unit.
- Do not wash your car with an automatic car wash or high-pressure water as it may result in water entering the camera or the camera falling off.

NOTE

- Connection to a TV with an RCA video input is possible, but confirm whether the TV you use has a reverse gear connection function.
- This product is designed to supplement the driver's view, but the camera images do not show all dangers and obstacles. If you install rear view camera, be sure to look behind you when reversing to confirm the view.
- This product features a wide-angle lens, so the near view is wide and the far view is narrow, which may create a false sense of distance. Be sure to look behind you when reversing to confirm the view.
- The position of guide line displayed on the monitor may differ from actual condition. Please take the actual guide line as reference and check with eyes.
- Check camera bracket and mount installation before driving.
 - Are the screws loose?
 - Is the camera bracket firmly secured?
 - If the camera comes loose while you are driving it may cause an accident.
- Before finally installing the unit, connect the wiring temporarily, making sure it is all connected up properly, and the unit and the system work.
- When mounting this unit, make sure none of the leads are trapped between this unit and the surrounding metalwork or fittings.
- Before drilling any mounting holes always check behind where



you want to drill the holes. Do not drill into the gas line, brake line, electrical wiring or other important parts.

- If this unit is installed in the passenger compartment, anchor it securely so it does not break free while the car is moving, and cause injury or an accident.
- If this unit is installed under a front seat, make sure it does not obstruct seat movement. Route all leads and cords carefully around the sliding mechanism so they do not get caught or pinched in the mechanism and cause a short circuit.

Care and maintenance

- When the product gets dirty, wipe dry with a silicon cloth or soft cloth. If it is seriously stained, remove stain with a cloth moistened with a neutral cleaner and then wipe the cleaner away. Do not use a hard cloth and/or a volatile substance such as lacquer thinner or alcohol, scratches, deformation, degradation and/or damage may result.
- When a lens component gets dirty, wipe gently with a soft cloth moistened with water. Do not rub with a dry cloth to prevent scratching the lens.

Installation Procedure

- 1 To prevent a short circuit, remove the key from the ignition and disconnect the  battery.
- 2 Make the proper input and output wire connections for each unit.
- 3 Connect the power cord wires in the following order: GND, ACC, and camera connecting cord.
- 4 Install the unit in your car.
- 5 Reconnect the  battery.

WARNING

- If you connect the ignition wire (Red) to the car chassis (Ground), you may cause a short circuit, that in turn may start a fire. Always connect the ignition wire to the power source running through the fuse box.
- Do not cut out the fuse from the ignition wire (Red). The power supply must be connected to the wire via the fuse.

CAUTION

- If your car's ignition does not have an ACC position, connect the ignition wires to a power source that can be turned on and off with the ignition key. If you connect the ignition wire to a power source with a constant voltage supply, as with battery wires, the battery may die.
- If the fuse blows, first make sure the wires aren't touching to cause a short circuit, then replace the old fuse with one with the same rating.
- Insulate unconnected wires with vinyl tape or other similar material. To prevent a short circuit, do not remove the caps on the ends of the unconnected wires or the terminals.
- After the unit is installed, check whether the brake lamps, blinkers, wipers, etc. on the car are working properly.
- Install so that it does not obstruct the rear field of view.
- Install so that it does not protrude from the side of the car.
- Do not perform installation in rain or fog.
- When humidity is high, dry the surface to which the unit is to be attached before installing.
- Moisture on the attachment surface reduces adhesive strength, which may lead to the unit coming off.
- Do not attach the camera bracket to areas on the car body treated with fluorocarbon resin, or glass.

- These may result in the camera falling off.
 - Do not subject the camera to unnecessary force.
 - Thoroughly clean where tape is used for sticking on the unit.
- Refer to the instruction's manual for details on connecting the other units, then make connections correctly.
- Secure the wiring with cable clamps or adhesive tape. To protect the wiring, wrap adhesive tape around them where they lie against metal parts.
- Route and secure all wiring so it cannot touch any moving parts, such as the gear shift, handbrake and seat rails.
- Do not route wiring in places that get hot, such as near the heater outlet. If the insulation of the wiring melts or gets torn, there is a danger of the wiring short-circuiting to the vehicle body.
- When replacing the fuse, be sure to use only fuse of the rating prescribed on the fuse holder.
- To minimize noise locate the TV antenna cable, radio antenna cable and RCA cable as far away from each other as possible.
- Lay the cords by avoiding high-temperature areas. Use corrugated tubes for wiring inside the engine room. If a cord contacts a high-temperature area of the vehicle, the coating may melt and cause short-circuiting, which may lead to a fire or electric shock hazard.

Kit Components

Camera1



Power cord (7.5 m / 24.6 ft).....1



Grommet.....1



Square Mount1



Cover1



Camera bracket1



Rubber ring1



Screw ($\phi 2 \times 4$ mm) (For cover)4



Screw ($\phi 2 \times 5$ mm) (For camera and bracket)2



Screw ($\phi 3 \times 10$ mm) (For car body)2



Double-side adhesive tape.....1



CORRECTION / CORRECCIÓN

Wrong / Erroné / Falso

Correct / Correcto

P3 : Kit Components

Screw ($\phi 2 \times 5$ mm) (For camera and bracket) 2



P11 : Composants du kit

Vis ($\phi 2 \times 5$ mm) (Pour caméra et support) 2



P19 : Componentes del kit

Tornillo ($\phi 2 \times 5$ mm) (Para la cámara y la abrazadera) 2



P3 : Kit Components

Screw ($\phi 1.9 \times 5$ mm) (For camera and bracket) 2



P11 : Composants du kit

Vis ($\phi 1.9 \times 5$ mm) (Pour caméra et support) 2



P19 : Componentes del kit

Tornillo ($\phi 1.9 \times 5$ mm) (Para la cámara y la abrazadera) 2



P5 : Square Mount

1 Install the camera on the mount as follows.

Screw ($\phi 2 \times 5$ mm) (For camera and bracket)
Recommended torque 0.14 N.m



P13 : Monture carrée

1 Installez la caméra comme suit sur la monture.

Vis ($\phi 2 \times 5$ mm) (Pour caméra et support)
Couple conseillé à 0.14 N.m



P21 : Soporte Cuadrado

1 Instale la cámara en el soporte de la siguiente manera.

Tornillo ($\phi 2 \times 5$ mm) (Para la cámara y la abrazadera)
Par recomendado 0.14 N.m



P5 : Square Mount

1 Install the camera on the mount as follows.

Screw ($\phi 1.9 \times 5$ mm) (For camera and bracket)
Recommended torque 0.24 N.m



P13 : Monture carrée

1 Installez la caméra comme suit sur la monture.

Vis ($\phi 1.9 \times 5$ mm) (Pour caméra et support)
Couple conseillé à 0.24 N.m



P21 : Soporte Cuadrado

1 Instale la cámara en el soporte de la siguiente manera.

Tornillo ($\phi 1.9 \times 5$ mm) (Para la cámara y la abrazadera)
Par recomendado 0.24 N.m



P7 : License Plate Mount

1 Install the camera (Square Mount) on the mount.



Screw ($\phi 2 \times 5$ mm) (For camera and bracket)
Recommended torque 0.14 N.m

P15 : Monture de la plaque d'immatriculation

1 Installez la caméra (Monture carrée) sur la monture.



Vis ($\phi 2 \times 5$ mm) (Pour caméra et support)
Couple conseillé à 0.14 N.m

P23 : Soporte para la Matricula

1 Instale la cámara (Soporte Cuadrado) en el soporte.



Tornillo ($\phi 2 \times 5$ mm) (Para la cámara y la abrazadera)
Par recomendado 0.14 N.m

P7 : License Plate Mount

1 Install the camera (Square Mount) on the mount.



Screw ($\phi 1.9 \times 5$ mm) (For camera and bracket)
Recommended torque 0.24 N.m

P15 : Monture de la plaque d'immatriculation

1 Installez la caméra (Monture carrée) sur la monture.



Vis ($\phi 1.9 \times 5$ mm) (Pour caméra et support)
Couple conseillé à 0.24 N.m

P23 : Soporte para la Matricula

1 Instale la cámara (Soporte Cuadrado) en el soporte.



Tornillo ($\phi 1.9 \times 5$ mm) (Para la cámara y la abrazadera)
Par recomendado 0.24 N.m

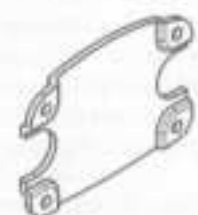
Metal Mount1



Screw ($\phi 2 \times 8$ mm)
(For car body)2



Cover1



Screw ($\phi 2 \times 4$ mm)
(For cover)4



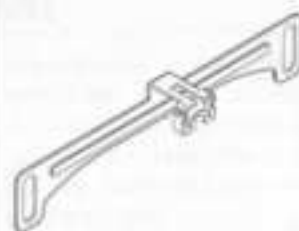
Double-side adhesive tape.....1



Rubber Mount1



License Plate Mount1

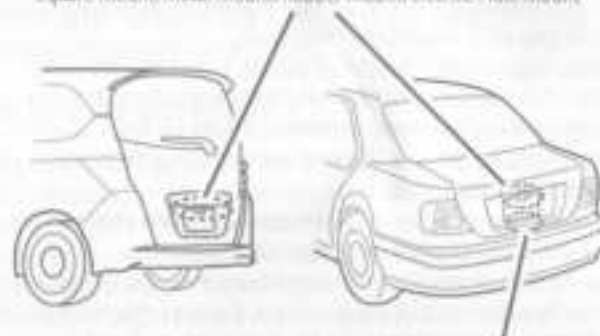


Recommended Installation Position

Examples of correct camera installation on the rear of the vehicle

Top of the license plate:

Square Mount/Metal Mount/Rubber Mount/License Plate Mount



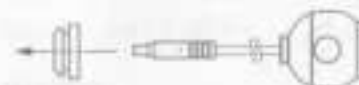
The underside of the license plate:

Metal Mount/Rubber Mount

When you decide on the camera installation position, clean the surface of the installation position. Using a commercially available cleaner, wipe the dirt, moisture, and oil away from the surface on which the camera bracket is to be attached.

Using a grommet

- 1 Drill a hole of $\phi 10$ mm for the wiring.
- 2 Pass the cable connector on the camera side through it.



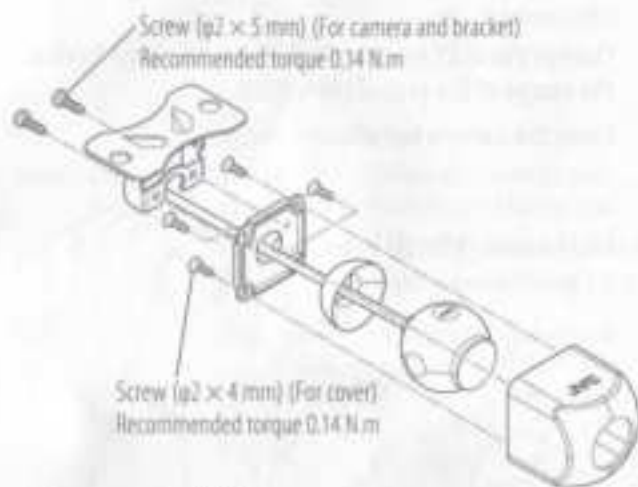
- 3 Waterproof the grommet area on the inner side of the back door with a commercially available sealant or similar.



Installing the Camera – Square Mount

Tighten the screws firmly with the recommended torque, as there is a risk of parts being damaged or parts falling.

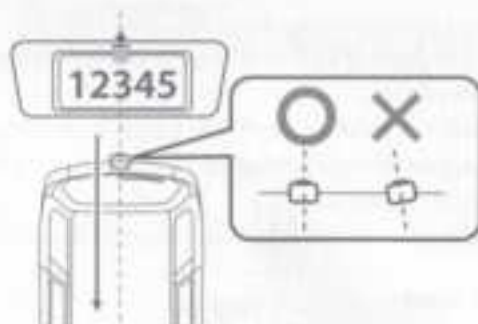
1 Install the camera on the mount as follows.



Mount so that the "JVC" logo appears at the top.

2 Fix the camera temporarily with tape, etc.

Using a piece of tape, etc., fix the camera temporarily.



Install the camera at the center of the vehicle and not to hide the license plate. And also install straight toward the forward/reverse direction of the vehicle. Be careful not to lean the camera toward other directions of the vehicle, etc.

3 Complete all of the required connections.

4 Display the camera view.

Before watching the camera view, apply the parking brake and chock the wheels so that the vehicle will not move. Otherwise, an unexpected accident may result.

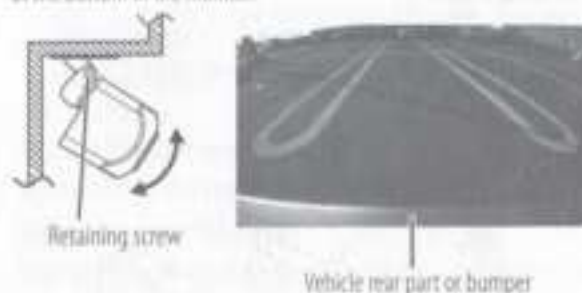
For displaying the camera view, read the instruction manual for your video monitor.

Change the shift lever to the R (Reverse) range to view the image of the rear of the vehicle.

5 Adjust the camera angle.

When adjusting the camera angle, be careful not to stretch the camera cord.

Adjust the angle so that the rear of the vehicle or the bumper can be seen at the bottom of the monitor.



6 After adjusting the camera angle, tighten the retaining screws firmly.

Inspect the retaining screws at times. If they are loose, tighten them firmly.

7 Fix the camera firmly in position.

1) Peel off the paper liners from the double-side adhesive tape and attach it. After attaching, push the camera bracket with your finger to ensure close adhesion.

Do not touch the adhesive surface with your hand or peel and reattach the tape, as these will degrade the adhesive force and may cause the camera bracket to be detached.

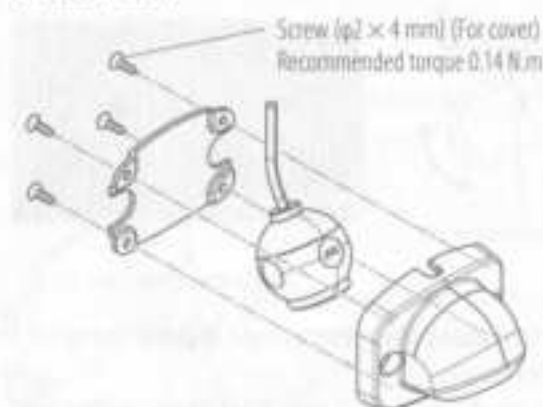
2) Secure the mount on the vehicle body using the screws (For car body).



Installing the Camera – Metal Mount/Rubber Mount

1 Install the camera on the mount as follows.

For Metal Mount



Mount the camera so that the "JVC" logo faces away from the ground.

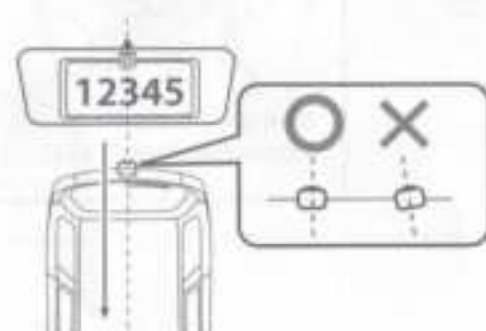
For Rubber Mount



Mount the camera so that the "JVC" logo faces away from the ground.

2 Fix the camera temporarily with tape, etc.

Using a piece of tape, etc., fix the camera temporarily.



Install the camera at the center of the vehicle and not to hide the license plate. And also install straight toward the forward/reverse direction of the vehicle. Be careful not to lean the camera toward other directions of the vehicle, etc.

3 Complete all of the required connections.

4 Display the camera view.

Before watching the camera view, apply the parking brake and chock the wheels so that the vehicle will not move. Otherwise, an unexpected accident may result.

For displaying the camera view, read the instruction manual for your video monitor.

Change the shift lever to the R (Reverse) range to view the image of the rear of the vehicle.

5 Clean the camera installation surface.

Using a commercially available cleaner, wipe dirt, moisture and oil away from the surface on which the camera bracket is to be attached.

6 Fix the camera firmly in position.

For Metal Mount



- 1) Peel off the paper liners from the double-side adhesive tape and attach it. After attaching, push the Metal Mount with your finger to ensure close adhesion.
Do not touch the adhesive surface with your hand or peel and reattach the tape, as these will degrade the adhesive force and may cause the Metal Mount to be detached.
- 2) Secure the mount on the vehicle body using the screws (For car body).

For Rubber Mount



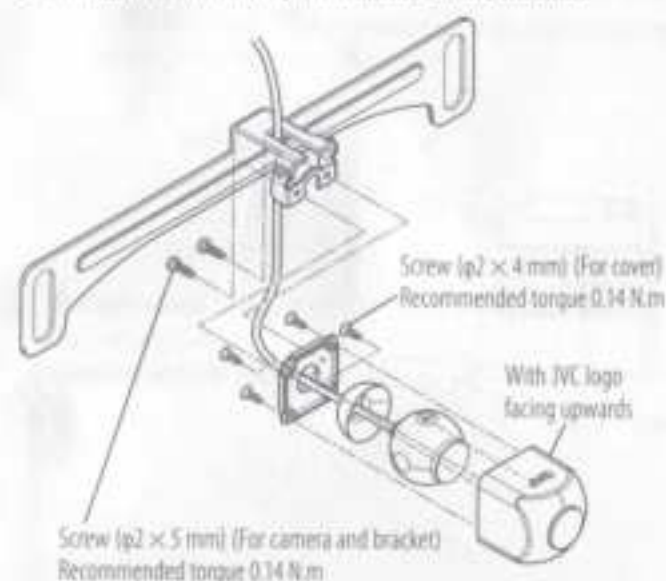
Peel off the paper liner from the double-side adhesive tape on the Rubber Mount and attach it. After attaching, push the Rubber Mount with your finger to ensure close adhesion.

Do not touch the adhesive surface with your hand or peel and reattach an attached tape, as these will degrade the adhesive force and may cause the Rubber Mount to be detached.

Installing the Camera – License Plate Mount

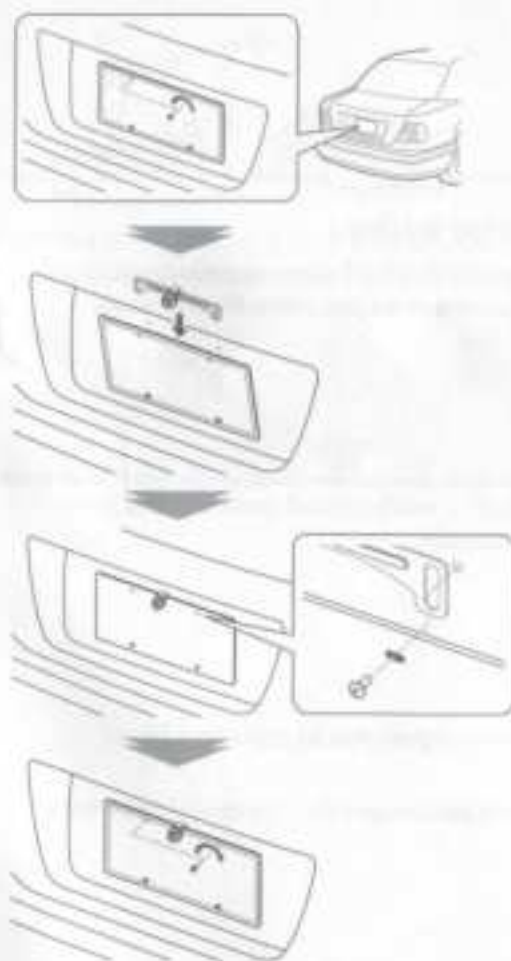
Tighten the screws firmly with the recommended torque, as there is a risk of parts being damaged or parts falling.

1 Install the camera (Square Mount) on the mount.



- Be careful not to overtighten when attaching the camera to the License Plate Mount.

2 Install the camera on the license plate as follows.



- Make sure the cable does not touch the edge of the license plate or frame during installation.

3 Complete all of the required connections.

4 Display the camera view.

Before watching the camera view, apply the parking brake and chock the wheels so that the vehicle will not move. Otherwise, an unexpected accident may result.

For displaying the camera view, read the instruction manual for your video monitor.

Change the shift lever to the R (Reverse) range to view the image of the rear of the vehicle.

5 Adjust the camera angle.

When adjusting the camera angle, be careful not to stretch the camera cord.

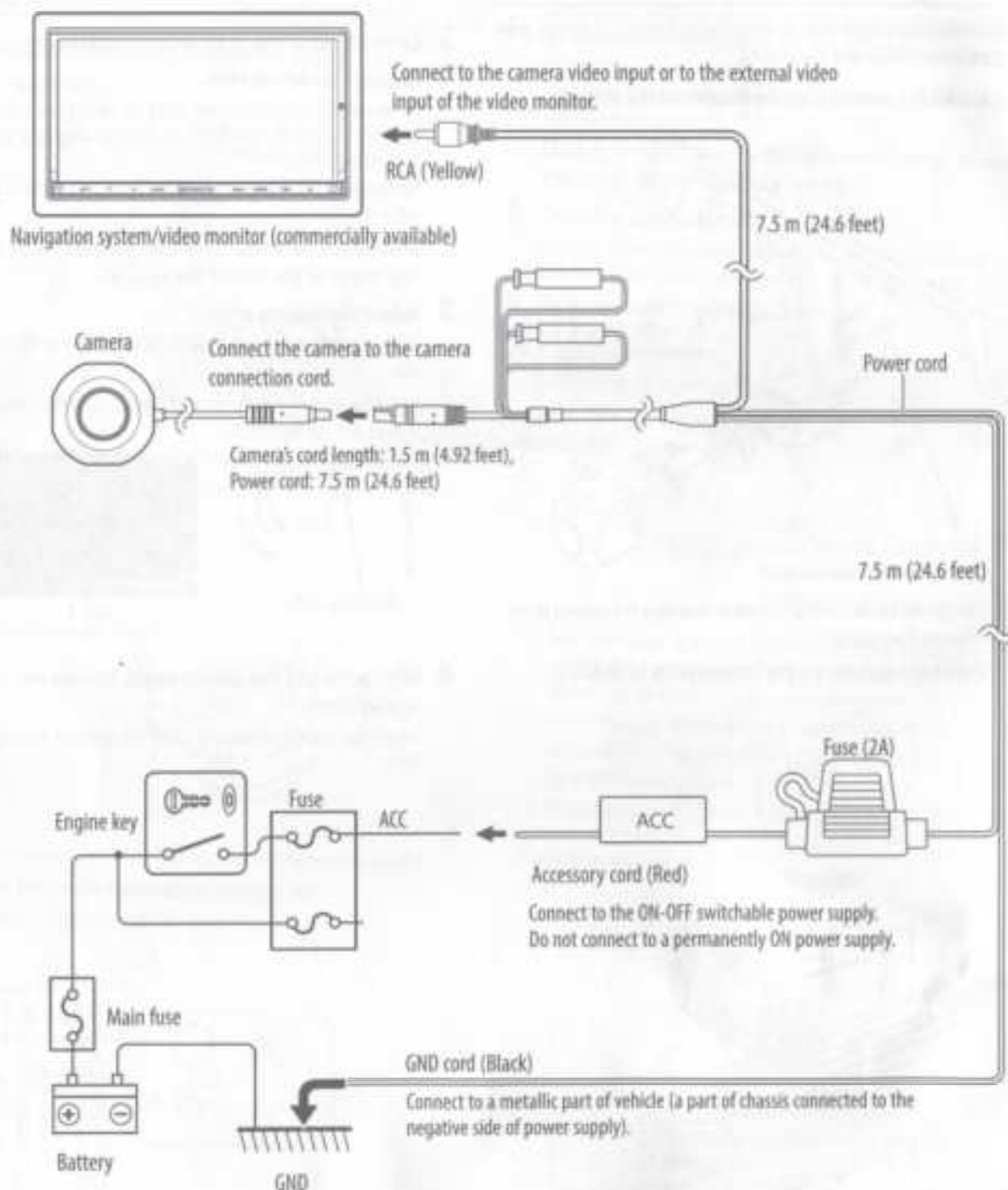
Adjust the angle so that the rear of the vehicle or the bumper can be seen at the bottom of the monitor.



6 After adjusting the camera angle, tighten the retaining screws firmly.

Inspect the retaining screws at times. If they are loose, tighten them firmly.

Basic Connections



CAUTION

- If the engine key of your vehicle does not have the ACC position, branch the wire energized when the engine key is ON and connect it to the ACC position of the fuse box.
- Before proceeding to connections, make sure that the engine key is not inserted and disconnect the \ominus terminal of the battery to prevent the short-circuiting incident.

Using the Camera as the Front Camera

You can also use the camera as the front camera.

Follow the Step below.

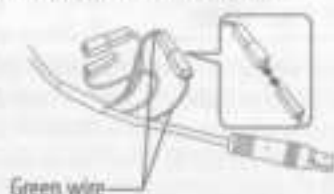
- 1 Disconnect the bullet terminal of the white wire to cancel the horizontal flip screen.

The screen turns to the normal orientation screen.



- 2 Disconnect the bullet terminal of the green wire to hide the Parking Line.

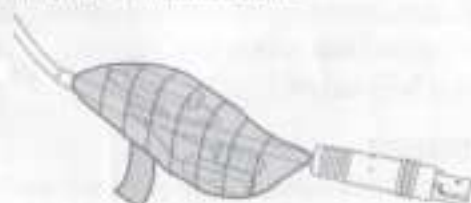
The parking line is disappeared from the screen.



After disconnecting the terminal, wrap the terminal with an insulating tape as illustrated below.



- To prevent a rattling noise, wrap the all bullet terminals with an insulating tape as illustrated below.



Camera Unit

Image Sensor: 1/3-inch color CMOS sensor

Lens: Wide angle, Focal length $f=1.96$ mm, F value 1.8

Angles of view

Horizontal: 125°

Vertical: 103°

Water-proof & Dust-proof: IP69K

Number of pixels: Approx. 470,000 pixels

Minimum illumination: 0.1 lx

Video output: 1.0 Vp-p/75Ω

Operating temperature: -30 °C to +70 °C

Operating voltage: DC 9.0 V - 16.0 V

Dimensions (W×H×D): 21.9 × 21.9 × 24.4 mm

7/8 × 7/8 × 15/16 inch

Weight: 28.3 g (1.0 oz) (without cable)

Mounting Unit

Square Mount

Dimensions (W×H×D): 25.9 × 25.9 × 24.9 mm

1 × 1 × 1 inch

Weight: 31.6 g (1.1 oz)

Metal Mount

Dimensions (W×H×D): 40.4 × 30.5 × 26.4 mm

1-9/16 × 1-3/16 × 1-1/16 inch

Weight: 27.8 g (1.0 oz)

Rubber Mount

Dimensions (W×H×D): 54.2 × 31.7 × 26.3 mm

2-1/8 × 1-1/4 × 1-1/16 inch

Weight: 9.9 g (0.3 oz)

License Plate Mount

Dimensions (W×H×D): 196.1 × 35.1 × 29.1 mm

7-3/4 × 1-3/8 × 1-1/8 inch

Weight: 49.3 g (1.7 oz)

- Mirror image means that the video image inverts the left and right just like the image seen on the rearview mirror or a side mirror.
- Specifications subject to change without notice.

For Canada

CAN ICES-3(B)/NMB-3(B)

For U.S.A FCC CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

Supplier's Declaration of Conformity

Trade Name: JVC
Products: UNIVERSAL CAMERA WITH MULTIPLE MOUNTING OPTIONS
Model Name: KV-CM40U
Responsible Party: JVC KENWOOD USA CORPORATION
4001 Worsham Avenue,
Long Beach, CA 90808, U.S.A.
PHONE: 1-800-252-5722

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:
(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

For Argentina



Información acerca de la eliminación de equipos eléctricos y electrónicos al final de la vida útil (aplicable a los países que hayan adoptado sistemas independientes de recogida de residuos)

Los productos con el símbolo de un contenedor con ruedas tachado no podrán ser desechados como residuos domésticos.

Los equipos eléctricos y electrónicos al final de la vida útil, deberán ser reciclados en instalaciones que puedan dar el tratamiento adecuado a estos productos y a sus subproductos residuales correspondientes. Póngase en contacto con su administración local para obtener información sobre el punto de recogida más cercano. Un tratamiento correcto del reciclaje y la eliminación de residuos ayuda a conservar los recursos y evita al mismo tiempo efectos perjudiciales en la salud y el medio ambiente.

JVC