# MobileView

## Forward Facing Camera Installation Manual

### UM-TR-012013

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#### http://www.mobileviewvideo.com

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## Introduction

This is the Installation Manual to the MobileView (TM) Forward Facing Camera. Read these instructions before installing or operating this product.

**Note:** A qualified service person, complying with all applicable codes, should perform all required hardware installation.

This manual provides installation and operation information. To use this document, you must have the following minimum qualification:

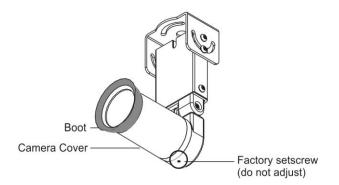
- A basic knowledge of CCTV systems and components; and
- A basic knowledge of electrical wiring and lowvoltage electrical hookups.

## Installation

You can mount the camera from above or from below (inverted). Some mounting surface might need to be reinforced to minimize the vibration of the camera. In these installations, place a tapping plate behind the mounting surface.

**Caution:** Do not adjust the setscrew (Figure 1). It is for factory use only.

Figure 1: Factory setscrew and cover boot



To mount the camera, do the following:

- Push the rubber boot onto the camera cover (Figure 1).
- 2. Position the unit on the mounting surface so that the lens points toward the area you want to view.

**Note:** Consider the camera's (with the boot attached) proximity to the vehicle's windshield, close enough to prevent glare and far enough away to not vibrate the windshield (about 3/4 inch recommended).

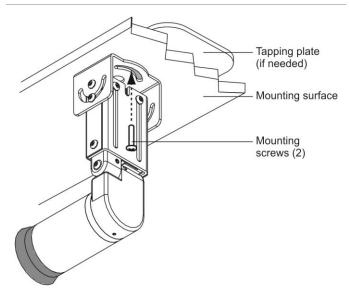
3. Use the provided template (Figure 12 on page 4) to mark the positions of the mounting and cable entry holes on the mounting surface.

4. While following your local codes, cut the cable entry hole and drill and prepare the mounting holes for the type of surface and fasteners (not provided) being used.

**Note:** We recommend attaching rivnuts and running 10/32 screws to mount the camera.

5. If you are hanging the unit from above, attach the unit with fasteners (not provided) that are appropriate for the mounting surface (Figure 2). If you are inverting the camera assembly, see *Mounting the camera from below*.

#### Figure 2: Mounting the camera from above



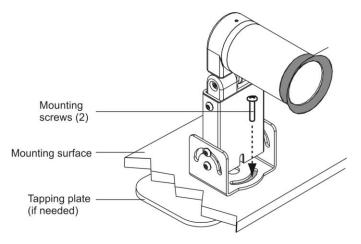
**Note:** Apply blue Loctite before tightening screws that have been loosened.

#### Mounting the camera from below

To mount the camera from below so that the camera is inverted, do the following:

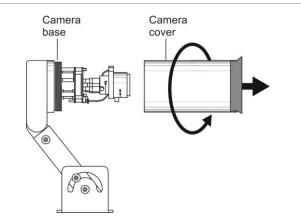
1. Attach the unit with fasteners (not provided) that are appropriate for the mounting surface (Figure 3).

Figure 3: Mounting the camera from below



- 2. Access live look-in mode to see the camera's field-ofview. To access the mode, do one of the following:
- Connect a Mobile View test kit to the back of the box of the DVR and use the kit's monitor or
- Connect a laptop computer to the DVR and use the Mobile View software program.
- 3. Turn the camera cover counterclockwise to remove the camera cover from the camera base (Figure 4).

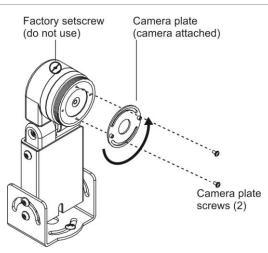
#### Figure 4: Accessing the camera base



4. Remove the two camera plate screws and rotate the camera plate 180 degrees to invert the attached camera (Figure 5).

#### Figure 5: Inverting the camera

Figure 6: Separating the camera arms



- 5. Rotate the camera plate 180 degrees to invert the attached camera.
- 6. Use the test kit or laptap computer monitor to adjust the camera's field of view.
- 7. Reinstall the camera plate screws.
- 8. Reattach the camera cover.
- 9. Disconnect the test kit or laptop computer.

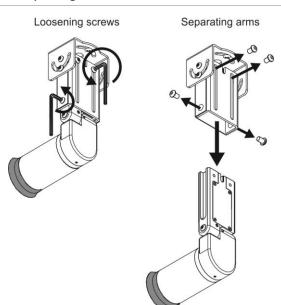
## Wiring

To connect the cables, do the following:

1. Run the provided RG179 cable between the vehicle's DVR and camera, and feed it out through the cable entry hole.

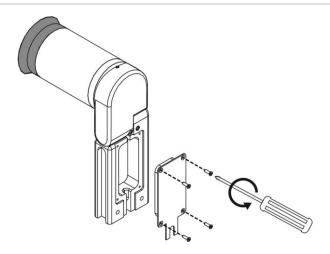
**Caution:** Hold onto the camera when removing the bracket screws.

2. Using the provided Allen wrench, remove the bracket screws from the camera arm (Figure 6).

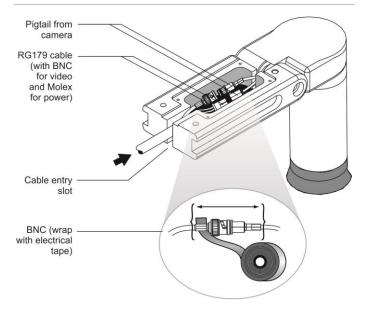


- Separate the lower and upper camera arms (Figure 6).
- 4. Remove the connection box screws to remove the connection box cover (Figure 7).

Figure 7: Accessing the connection box



5. Feed the RG179 cable through the cable entry slot and into the connection box (Figure 8 on page 3).



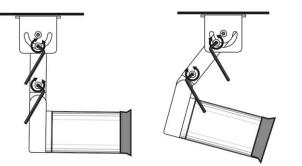
- 6. Make cable connections as shown in Figure 8.
- Wrap electrical tape around the BNC (Figure 8). Cover all metal. This prevents metal-to-metal contact that could short the video line.
- 8. Reattach the connection box cover (Figure 7 on page 3). Secure the cover screws with blue Loctite.
- 9. Insert the lower arm into the upper arm and secure the camera arm with the bracket screws (Figure 6 on page 3). Secure the screws with blue Loctite.

## Adjusting the camera angle

To adjust the camera angle, do the following:

1. Loosen the upper and lower pivot screws (Figure 9).

Figure 9: Adjustingthe camera angle



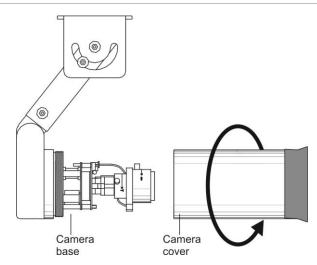
- 2. Set the camera to the desired angle.
- 3. Tighten all pivot screws. Secure the screws with blue Loctite.

## Focusing the camera

The camera has a varifocal lens (2.9 to 8 mm) and can also be adjusted for focus. To focus the camera, do the following:

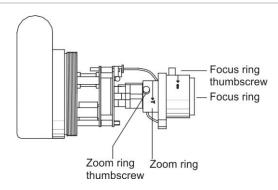
- 1. Access live look-in mode to see the camera's fieldof-view.
- 2. Turn the camera cover counterclockwise to remove the camera cover from the camera base (Figure 10).





3. Loosen the zoom ring thumbscrew (Figure 11).

#### Figure 11: Adjusting focus and zoom settings



- 4. Turn the zoom ring to set the desired field of view.
- 5. Tighten the zoom ring thumbscrew.
- 6. Loosen the focus ring thumbscrew (Figure 11).
- 7. Turn the focus ring to set the desired focus.
- 8. Tighten the focus ring thumbscrew.

**Note:** To keep the camera in focus, you may have to adjust the focus ring while you tighten the thumbscrew.

- 9. Reattach the camera cover.
- 10. Make final adjustments to the angle of the camera assembly and secure all screws with blue Locite. See Adjusting the camera angle.
- 11. Disconnect the test kit or laptop computer.

## Troubleshooting

• There is no video or it is intermittent.

The BNC connector is probably shorted or the wires are pinched.

Ensure that the BNC connector inside the connection box is wrapped with electrical tape to prevent metal-to-metal contact with the camera housing (Figure 8).

Ensure that the pigtail wires coming from the camera are not pinched in the hinge.

• Video is upside down or misaligned on the monitor.

The camera is not inverted or aligned. Invert and/or align the camera. See *Mounting the camera from below* on page 1.

• Video is shaky on the monitor.

There is excessive vehicular vibration of the camera. Reinforce the mounting surface with a tapping plate placed behind the mounting surface to minimize vibration.

## **FCC Complicance**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the installation instructions, may cause harmful interference to radio communications.

You are cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## **Contact information**

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## Mounting bracket template

Use the mounting bracket template to mark the positions of the mounting and cable entry holes on the mounting surface.

