

MM-4320-DVR



4.3" Factory Mount Mirror Monitor with Built-In DVR User Manual



ECHOMASTER

Installation Guide



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Introduction

Thank you for purchasing your EchoMaster Mirror Monitor.

EchoMaster mirror monitors are designed to improve safety by providing high quality images from camera inputs. This may help to improve vehicle maneuvering capabilities by displaying blind spots or areas not normally visible to the driver.

Please ensure you read and understand all aspects of this manual before fitting or using your EchoMaster mirror monitor.

Box Contents

- ▶ User Guide
- ▶ Mirror Monitor
- ▶ Main Harness
- ▶ Universal Mounting Button
- ▶ Cable Management
- ▶ Allen Key
- ▶ 8GB Micro SD Card

Key Features

- ▶ Factory replacement mirror
- ▶ Dual video sensing inputs
- ▶ Auto-dimming display
- ▶ Built-in shock sensor
- ▶ Built-in forward looking camera with Digital Video Recorder
- ▶ Built-in selectable motion detection

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Fitting Instructions

The MM-4320-DVR will replace your factory fitted rearview mirror.

Remove the original mirror from the vehicle and replace with the MM-4320-DVR. If your factory mounting bracket differs from the MM-4320-DVR, there is a supplied metal button that can be bonded to the windshield to allow the new mirror to fit.

Once the unit is in place, run the connections cable across the headliner of the vehicle and down the A pillar.

Please ensure that you do not impede the operation of any airbags that may be located in the A pillar of the vehicle. Any cable passing these airbags should be run behind the airbag and not in front of it.

Once the cable has been routed down to the dashboard, connect the camera inputs and power connections as shown in the wiring diagram section of this manual.

Operating Instructions

Upon powering up the screen, the DVR screen will be displayed and recording will start automatically, as long as an SD card is inserted.

The SD card slot is located on the right-hand side of the unit. Please take care when inserting the card as improper insertion can damage the card and the mechanism.

To switch to V1 video input, press and hold the REC button for 2 seconds.

To revert back to the DVR display, press the REC button again briefly.

The screen will automatically switch to V2 when it detects a video signal on that input.

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Operating Instructions (continued)

Pressing the menu button when a video signal is being viewed will allow you to adjust the following parameters.

Brightness	Adjust the brightness level of the display (0-100).
Color	Adjust the color of the display (0-100).
Contrast	Adjust the contrast of the display (0-100).
Sharpness	Adjust the display sharpness (0-100).
Reset	This resets all values to the default setting.

The screen will automatically turn on when it detects a signal input on either channel. If a signal is detected on both channels then V2 will take priority.

To stop and start recording, press the REC button. If a shock event is detected, the unit will automatically protect the current file.

When using the DVR function the menus can be accessed by pressing the MENU button. (Recording must be stopped for this to be enabled).

The menu categories can be scrolled through by pressing the MODE button and then each list can be scrolled through by pressing the REC button.

To enter a menu feature, press the REC button and change the values using the up and down arrow buttons. Repeatedly pressing the REC button will back out to the main menu.

Pressing MENU again will exit the menu structure.

Movie Mode menu:

Movie Mode	Adjust the resolution of the recording.
Movie Quality	Adjust the picture quality (lower quality will increase the amount of video able to be recorded).
Movie Clip Time	Sets the length of each individual recording clip.
Movie Off Time	This sets how long after power off the unit will continue to record for.

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Operating Instructions (continued)

Motion Event Record	This sets the recording length when a motion event is detected (requires the unit to be powered constantly).
Sound Record	This turns the built-in microphone recording on or off.
Mic Sensitivity	Adjust the sensitivity of the built-in mic.
Scene	Set different scene modes to improve picture quality in different scenarios.
Exposure	Change the exposure value of the camera.
White Balance	Change the white balance of the camera.
ISO Sensitivity	Change the ISO setting of the camera.

Still Capture:

Still Image Size	This sets the size of the picture when taking still images. Lower resolution will allow for more pictures to be stored on the card.
Still Quality	This adjusts the image quality for still images (lower quality offers more storage).
Scene	This adjusts the camera settings to compensate for different environments.
Exposure	Adjust the exposure level of the camera.
White Balance	Adjust the white balance of the camera.
ISO Sensitivity	Adjust the ISO setting of the camera.
Color	Adjust the color setting of the camera.
Effect	Apply certain graphical effects to the still images.

Playback Menu:

Volume – Adjust the playback volume through the internal speaker.

Delete – Allows you to delete one or all of the files (protected files cannot be deleted).

Protect – This allows you to protect any files not currently protected.

Media Tool:

Format SD Card – This will format the contents of the currently inserted card (Warning: this will delete all contents).

SD Card Info – This shows information about the currently inserted card.

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Operating Instructions (continued)

General Settings:

Beep	Turns the button press beep on or off.
Clock Settings	Allows you to set the current date and time.
Date Format	Change the displayed format of the date.
Stamp	You can set whether the date and time are permanently embedded into the recordings.
Language	Choose the language of the menu structure.
Flicker	You can change the flicker rate between 50 and 60 Hz to improve playback on different devices.
LCD Rotate	This allows you to invert the recording on a vertical plane.
LCD Power Save	This allows you to set the automatic turn-off of the display.
Protect Level	This will allow you to adjust the built in G sensor settings (lower is less sensitive).
Motion Detection	This will set the camera's sensitivity to movement when using the automatic motion detect feature.
Reset Setup	This will reset all settings to the default values.
FW Version	Display the current firmware version on the unit.

Pressing the mode button while in the DVR screen will switch between the Recording, Photo and Playback modes. Pressing the right-hand arrow button while recording will mute the built-in microphone. Pressing the menu button while recording will lock the current file to prevent overwriting.

Wiring Diagram



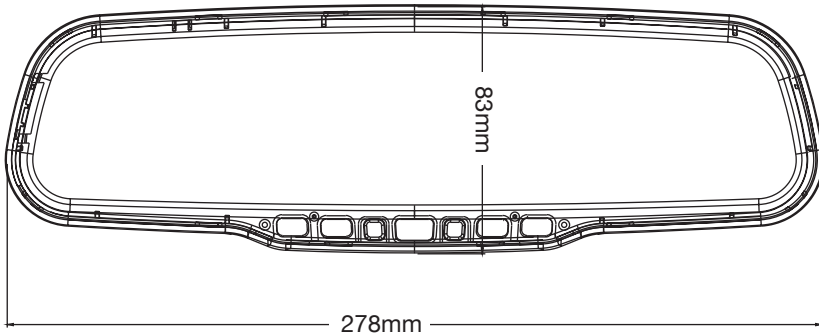
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Dimensions (mm)



Specifications

MM-4320-BT	
Screen Size	4.3"
Aspect Ratio	16:9
Power Supply	12VDC
Resolution	480x272
Luminance	1000
Contrast	500:1
TV Format	Auto
OSD Languages	Multi
Video Inputs	2
Audio Inputs	0
Triggers	0
Current Draw	300-1000mA
Operating Temperature	-20C - +60C
Parking Guidelines	No
Connection Type	RCA
Dimensions (mm)	278 x 83 x 46



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