

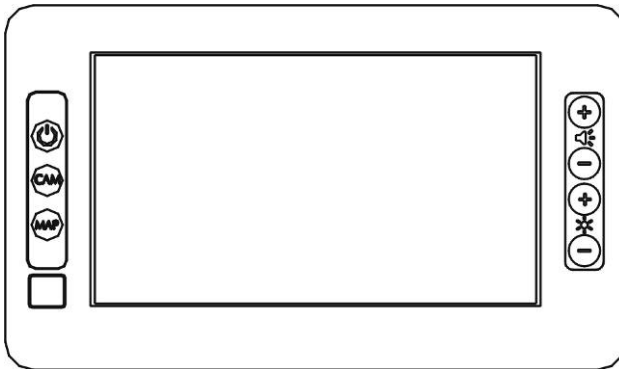


Kinequip Specialty Vehicle Division

In-Car LCD Display System Package

Installation Manual

Model: MV-0046



Features:

- **4.5" TFT Color LCD Display**
- **Camera 1 input for Rearview camera**
- **Camera 2 input for Side view camera**
- **Navigation Input**

Cautions!

The product is intended to assist in safe driving and to allow the driver to have a broader rearview while the vehicle is in reverse. You, as the driver, are solely responsible for the safe operation of your vehicle and the safety of your passengers according to the country and their local traffic regulations. Do not use any features of this system to the extent it distracts you from safe driving. Your first priority while driving should always be the safe operation of your vehicle. Kinequip Inc. cannot accept any responsibility whatsoever for accidents resulting from failure to observe these precautions or safety instructions.

1. This product utilizes high voltage. Any unauthorized modifications or damage to the products may result in electrical shock. Handle all components with care. Inspect regularly for damage to components and cabling.
2. You shall be responsible to ensure that the installation of this product does not void or affect the vehicle manufacturer's warranty. Kinequip Inc. or its branches are not liable in full or in part for improper installation resulting in loss or damage to your property, or for voiding all or part of the vehicle manufacturer's warranty.
3. Do not apply excessive force to any of the components contained within this kit. Excessive force used before, during or after installation that results in a damaged or non-functional part shall void all warranties.
4. Please follow the procedure from this installation manual. Improper installation or modification of this product shall void all warranties.

Preface

There is a blind spot that exists at the back of a vehicle while the vehicle is in reverse. Equipped with a camera, this electronic monitor ensures safety by providing the driver with a clear and wide image of the area behind the vehicle.

WARNING:

Backing up vehicle

Do not back up vehicle while watching the monitor screen. Always look in the direction of vehicle motion. Use the monitor as an aid in safety confirmation. The distance looks different in the monitor. The actual distance is shorter than it looks in the monitor. The range of image is limited. Beware of blind spots.

Packing list

The Monitor Package Model MV-0046 consists of the following items:

1. LCD Monitor -1
2. Camera Cable (6000mm) -2
3. Power Cable (included Filter Box) -1
4. Wire Clips -4
5. Mounting screws -4

1. Installation Instructions

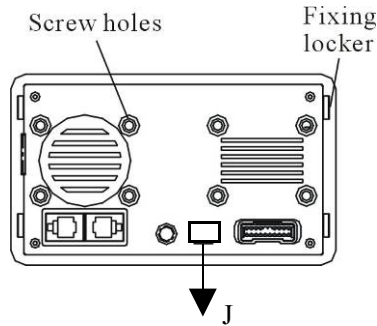


Figure 1

(1) Monitor Installation 1

- a) Select a suitable mounting location in the vehicle, and drill a 131.5X74 mm rectangle mounting hole at the suitable location.
- b) From outside of the rectangle mounting hole put the monitor cable through the mounting hole with the LCD screen exposed. And lock the monitor tightly with the fixing locker of the monitor.

(2) Monitor Installation 2 – (Optional Pana–Vise mount)

Use the 4pcs screws to tight the bracket of mounting plate on the back of the display system. (The monitor provides 3 positions to install the mounting plate with the 8 screw holes on the back of the monitor, then you can install the mounting plate on the Left, Middle, or Right on the monitor.)

(3) Plug the connector from the navigation monitor cable into the receptacle at the backside of the monitor screen. Route the rest of the monitor cable to the Navigation computer.

(4) Connect the 4 wires in the following manner.

- a) Red wire - 12-volt ignition (12 volt with ignition on)
- b) Black wire - Chassis ground (negative)

- b) Green wire - 12-volt turn signal (12 volt when vehicle is turning)
- c) Blue wire - Reverse light switch (12 volt when vehicle is in reverse)

WARNING: Observe polarity when connecting the cables. The cable must not be reversed or modified.

2. Signal Inputs

The signal input connections for the system include:

- (1) **Camera 1:** By connecting rear camera with Monitor AVin-1 Plug, users can see the rearview camera image when the car is in reverse.
- (2) **Camera 2:** By connecting the Side view camera with Monitor AVin-2 plug, users can see the turning camera image.
- (3) **Navigation:** The navigation signal is supplied via the connector

3. Controls and Indicators

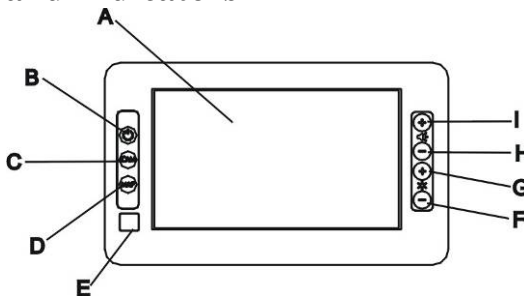



Figure2

Figure 2 illustrates the controls and indicators of the MV-0046 Monitor:

A: 4.5” TFT color LCD

B: “  button (power button):

Switches the unit between Manual mode and Standby mode.

Standby mode:

- a. When in standby mode the unit will be turned on when either the Rearview Camera 1 or Side view Camera 2 trigger is triggered. The unit will turn off

when the triggers are released.

- b. The unit will turn on if the Power button; Camera button or Map button is pressed. The power button will need to be pressed to turn the unit back off.

Manual mode:

- a. When in manual mode, the operator can manually switch between Rearview Camera 1 and Side view Camera 2 and Map mode.
- b. Manual mode is activated by pressing the Power button, Camera button or Map button.

C: “CAM” button:

Switches between Rearview Camera 1 and Side view Camera 2

D: “MAP” button:

Activates the Navigation screen and toggles between different map modes for the navigation unit.

E: Internal Infra-RED Receiver for Navigation Remote Control.

F: “-” Button:

Incrementally Decreases the LCD Brightness.

G: “+” Button:

Incrementally Increases the LCD Brightness.

H: “-” Button: *

Incrementally Decreases the Speaker Volume.

I: “+” Button: *

Incrementally Increases the Speaker Volume.

J: Inside and outside speaker conversion [16 Ω 0.5 w] (figure 1)

*GPS & Camera volume control.

Specifications

General

| | |
|-----------------------------|---------------|
| Power Supply | 12VDC |
| Power Consumption | <10W |
| Current Draw | <800 mA |
| Audio Power Output | 0.5W × 16 (Ω) |
| Operating Temperature Range | 0°C to 50°C |

Display System

| | |
|----------------|-----------------------|
| Screen | 4.5" TFT Color LCD |
| Brightness | 400 cd/m ² |
| Contrast Ratio | 150:1 |
| Backlight Life | 10000 hours |
| Resolution | 960×234 |
| Video Format | NTSC/PAL |
| Display Format | 16: 9 |

Maintenance

Your rearview mirror requires little care, however to maintain it in optimum condition follow the procedures below:

1. Keep your system away from excessive moisture, extreme heat or cold and magnetic fields.
2. Keep liquids away from the display.
3. Do not place external devices or other objects on the top of the mirror.
4. Occasionally clean the surface of the mirror with a soft cloth moistened with water or window cleaner.

Troubleshooting

| Symptoms | Solutions |
|--|---|
| The Monitor is not on after the car is started? | <ol style="list-style-type: none">1. Check the installation-wiring diagram.2. Ensure that the parallel red and black line is connected properly. |
| No video signal appears while reversing the car? | <ol style="list-style-type: none">1. Check the rearview Camera lens.2. Check the rearview Camera wiring and connection.3. Check the cable from the rearview mirror is connected properly. |
| Video image is not sharp enough? | Clean the lens of the camera. |

Illustration of Connections

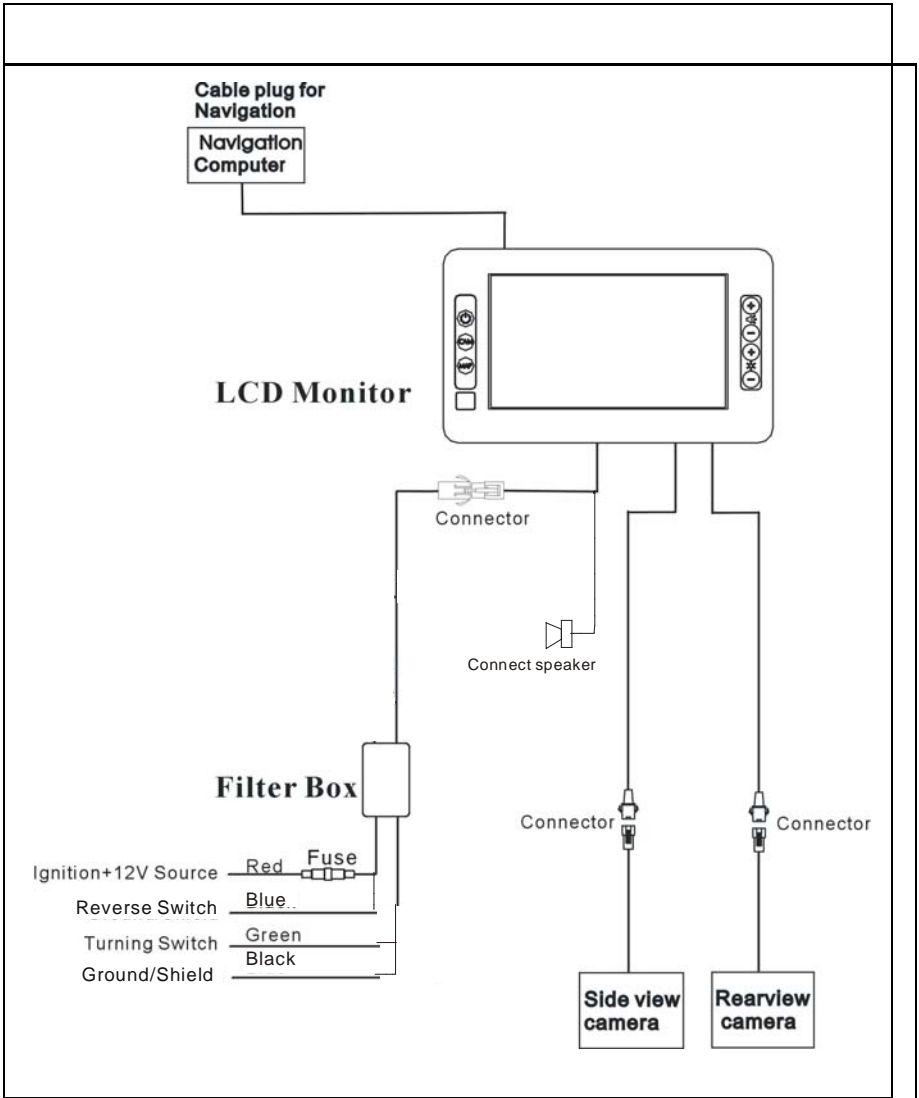
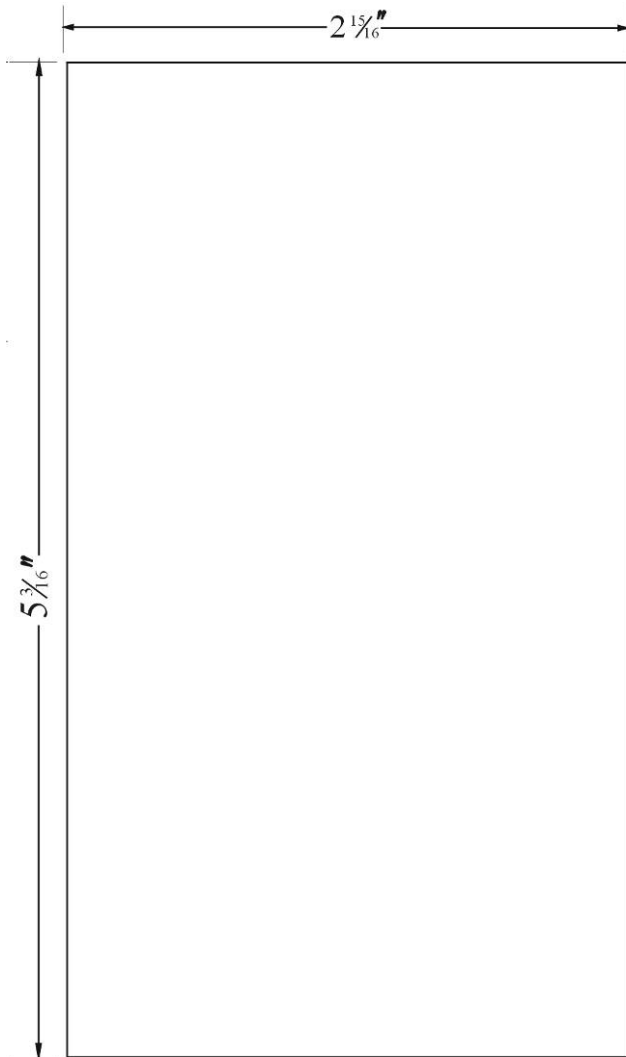


Figure3

Size of membrane unit in stainless hole (1:1) for Ins tall anti on





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