REI

USER MANUAL

7” MONITOR LCD LED FIXED

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In case of doubt, please, contact us with the following data: Model and serial number.

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SUMMARY

1. GENERAL INFORMATION

1.1. WARRANTY POLICY

To know more about the REI DO BRASIL Equipment Warranty Policy, please refer to our "Warranty Term" in www.reibrasil.com.br.

1.2. WARRANTY ATTENDANCE

Through the RMA (Return Material Authorization) system, our customers can request Warranty services and receive orientation, so that we can serve you the best way as well, as check the status of your request in real time and still have access to the product history anytime, anywhere.

To access the RMA System is very simple. Go to www.reibrasil.com.br and select the option "Service - Guarantee and Support".

1.3. IDENTIFICATION

Rei equipments have an identification label that includes: Name, Product Code and Serial Number, as shown below:

1.4. UNPACKING THE EQUIPMENT

- Open the box and carefully, remove the equipment together with the shim and the protective plastic.
- Remove the plastic bag and rest the monitor on a secure surface.
- Remove the protective film from the screen only at the end of the installation.
- The package is made of recyclable material. Forward this material to the waste Management Service in your area.

OBS: Inside the box should contain the Monitor, Support for Built-in Installation, Pedestal and the Remote Control.

1.5. GENERALTECHNICAL DATA

MONITOR SPECIFICATIONS	Operating Voltage	09 to 36Vdc (Nominal: 12Vdc / 24Vdc)
	Power	3 a 12W
	Standby Current	95mA (24Vdc)
	Impedance	75 Ω
	Operating Temperature	-30º to 85ºC
	Protections	Short circuit and Polarity inversion.
	Weight	0,400kg
	Dimensions	110 x 183 x 20 mm
	Number of inputs	5 (1 Power; 3 Video signals and Trigger)
	Number of Outputs	4 (1 auxiliar voltage w/ harness with 3 splits (BNC Model) and e 3 video outputs / power (Minifit model)
	Screen size	7”
	Resolution	800 x 480 pixels
	Image standard	NTSC and PAL-M
	Luminance	400cd/m²
	Contrast Ratio	500:1
	Angle of view	H: 70º / 70º V: 50º / 70º
	Update rate	10 to 30ms
	Driver	TFT active matrix
	Color arrangement	RGB-stripe
	True Color	16.7M
	Anti-Reflection System	YES

Table 1.0 – Monitor 7” Technical Specification

2. OPERATION

This product was developed using the principles of Embedded Technology to ensure that all components work in environments with constant vibrations without impairing image quality or causing malfunction in the equipment.

The Monitors produced by REI DO BRASIL use TFT technology, which improves the image quality of your LCD Monitor. It also features LED Backlight Technology (LCD Display Lighting), which guarantees lower power consumption, better contrast and brighter.

REI DO BRASIL Monitors uses the finest display. This is another differential, which reduces the relative weight of the equipment and improves heating dissipation.

This system was designed to be used in a rear camera system and to monitor the passenger lounge. This ensures greater safety during maneuvers and allows the driver to visualize what is happening in the saloon of the vehicle.

Other features of this monitor are the "CAM-GUIDE" functions, which allows the insertion of lines with 4 levels of proximity in the dedicated D-Camera display (Video 1), thus assisting the driver during the maneuvers. The "TRIGGER" is a function responsible for receiving the 24Vdc signal sent by the chassis when the reverse gear is engaged. When the equipment is in standby mode and the "TRIGGER" function is activated, the Monitor automatically turns on and shows the image being sent to the "Video 1" input. If the monitor is already on, the Video 1 input is also automatically triggered.

2.1. PROTECTIONS

Like all REI DO BRASIL products, the 7 " Monitor also has short circuit and reverse polarity protection.

If the monitor is submited to any situation that requires its protections, the equipment will be inoperative until the damages are identified and removed.

The screen has an anti-reflection system, which allows the images to be viewed even during daylight.

The Monitor has rounded corners that prevent sharp corners and edges.

2.2. CLEANUP

During the cleaning of the equipment, we recommend that you use a clean cloth moistened with warm, soapy water.

Water splashes may have fallen onto the screen should be removed as soon as possible. These liquids can cause LCD screen deformations when exposed for some time.

3. INSTALLATION

3.1. DIMENSIONS

The Monitor dimensions are showed below. The unit of measurement is in milimeters.

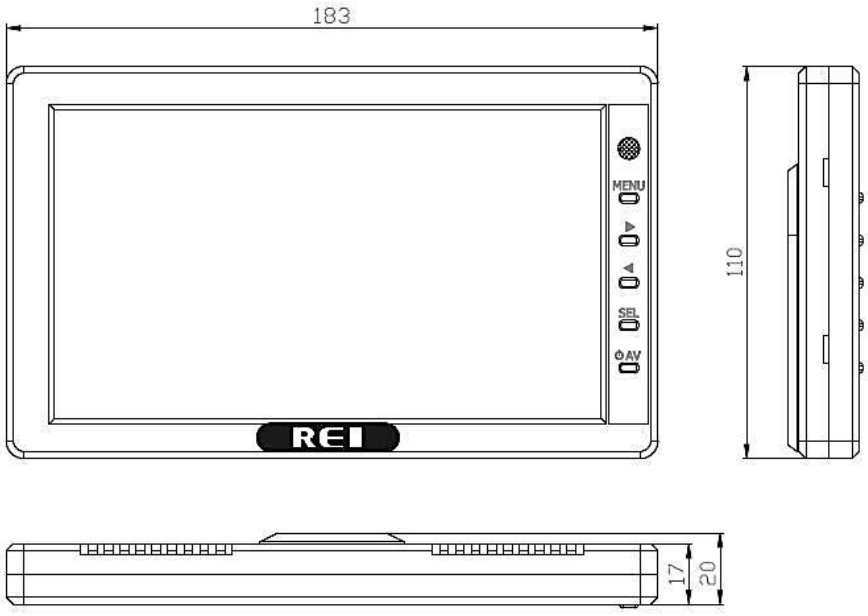

Figure 1.0 – 7" Monitor dimensions (mm)

3.2. PIN-OUT CONECTOR TO MONITOR

This monitor has two models, one with BNC connectors for Video inputs and one with MINIFIT connectors for Video inputs. Make sure that monitor power is available according to the diagram below:

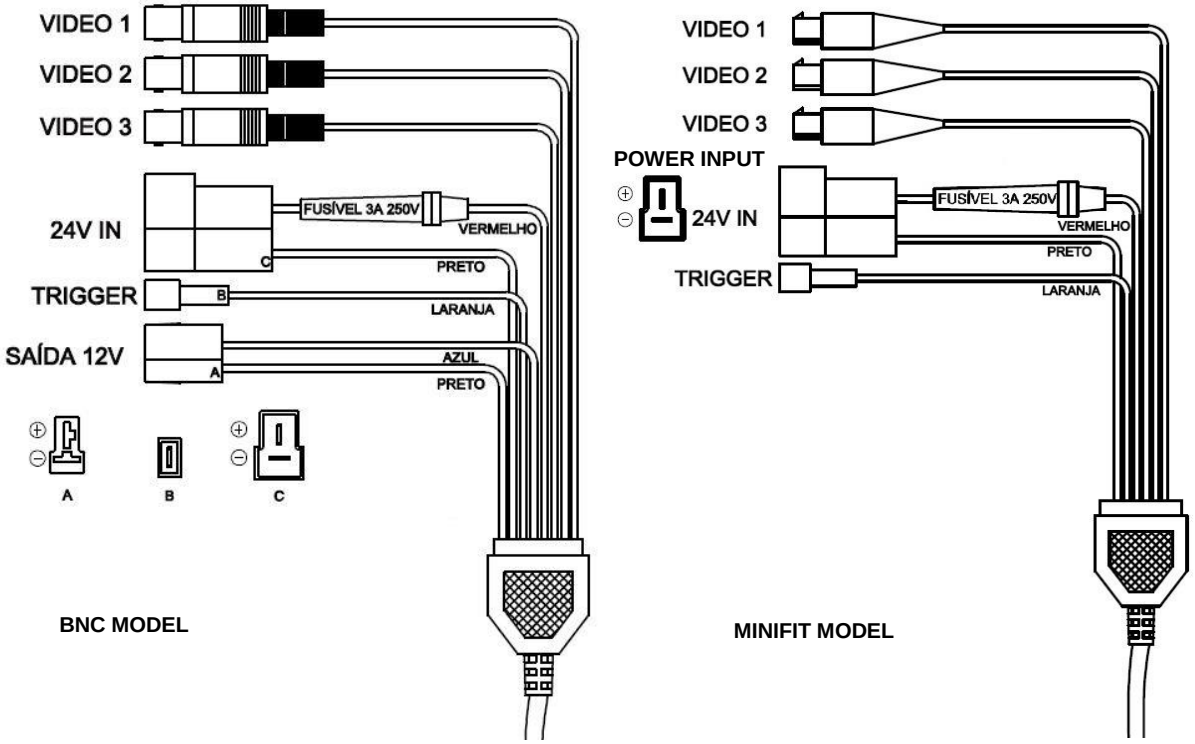

Figure 1.1 – Conectors to monitor Pin-Out

3.3. FIXTURE

The 7 " Monitor mounting brackets are included in the equipment package. There are two fixing systems for this monitor. Choose the most appropriate option, so that the system is safe and does not interfere with the driving of the vehicle.

Built-in Fixing: Allows the Monitor to be embedded in the vehicle's dashboard, giving a better finish.

Pedestal Fixing: Allows a surface installation with height adjustment and angle of the monitor. In this type of installation it is not necessary to make cuts or holes in the panel.

To execute the 7 "Monitor Embedded Mount, follow the instructions below:

1) Separate the support "01" and check the best place to install, so that the driver can easily view the monitor.

2) Cut out the place where the stand should be built. This cutout should have Width = 117mm / Height = 19mm / Depth> 19mm.

3) Attach the bracket to the cutout and screw it into the vehicle frame (in some cases a fixing system is required for this bracket, it is up to the technician to decide where and how the bracket will be).

4) Pass the harness through the holder hole and attach the monitor.

5) Connect the Power cable, Trigger, Video Camera, and 12Vdc Power to the cameras.

Drawing Embedded Support:

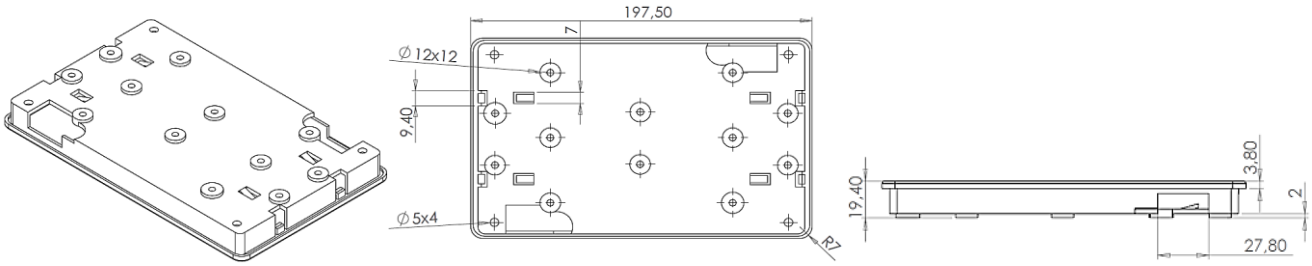

Figure 1.2 – Embedded Support

To execute the 7 " Monitor Stand Pedestal follow the instructions below:

1) Separate the holder "02" and check the best place to do the installation, so that the driver can easily view the Monitor.

2) Clean the base where "pedestal" will be glued (use cloth moistened with alcohol).

3) Remove the Liner from the double-sided tape (which is already glued to the pedestal) and glue the "Pedestal" in place that has been cleaned before. The cure time of double-sided tape is 24 hours. At the moment of fixation only 20% of the adhesion capacity is being used, so avoid efforts on the part during this time.

4) Attach the Monitor to the stand using the larger "rail" aperture, adjust the desired height, and tighten the counter nut.

5) Connect the Power cable, Trigger, Video Camera, and 12Vdc Power cable.

Pedestal Support Drawing:

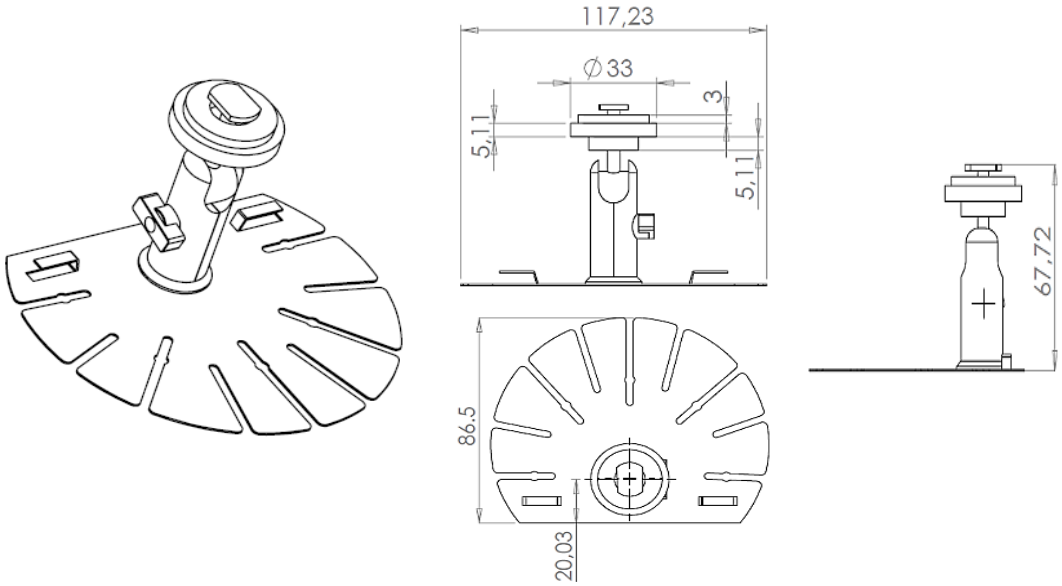

Figure 1.3 – Monitor Pedestal

3.4. SYSTEM INTERCONNECTION

The Monitor interconnection is very simple, requiring only the power and video signals to be reproduced. In the application of the Reverse Camera KIT, the cameras are connected via the auxiliary power outputs (S1, S2 and S3).

ATTENTION: The "Video 1" input is a special input for the Reverse camera because it has the "CAM-GUIDE" function and also the "TRIGGER" function.

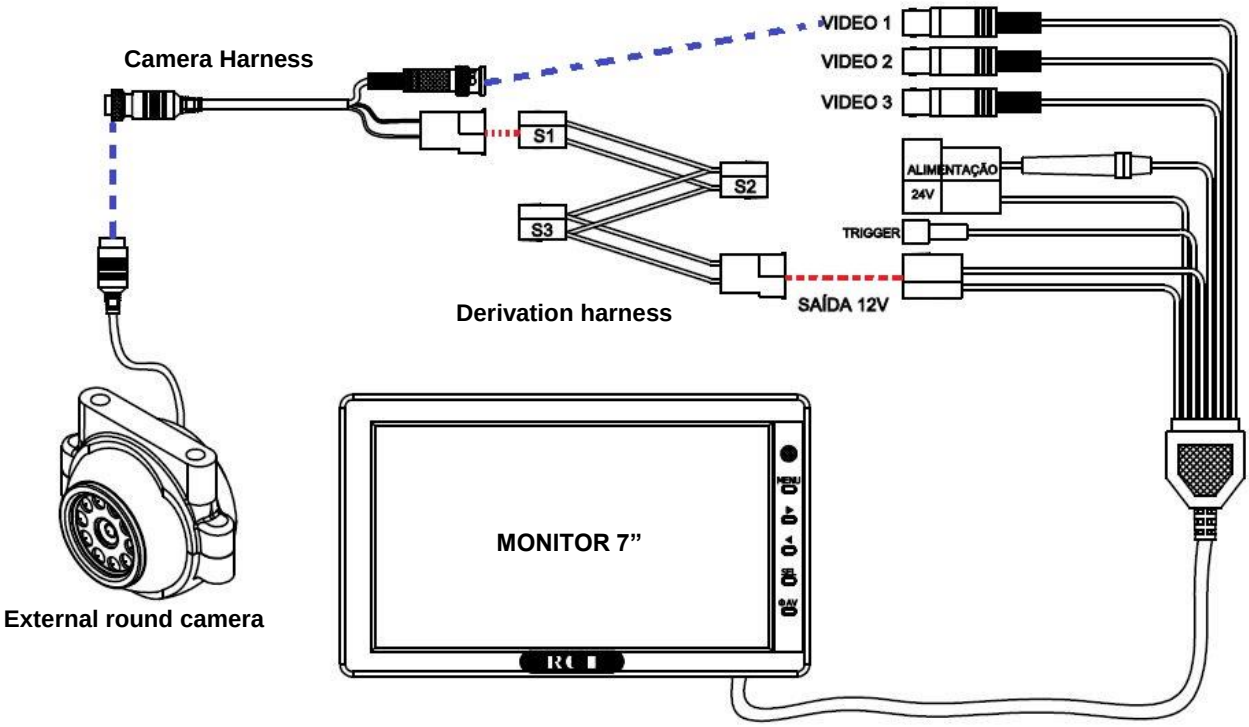

Figure 1.4 – Monitor Diagram Connection 7” BNC + Camera

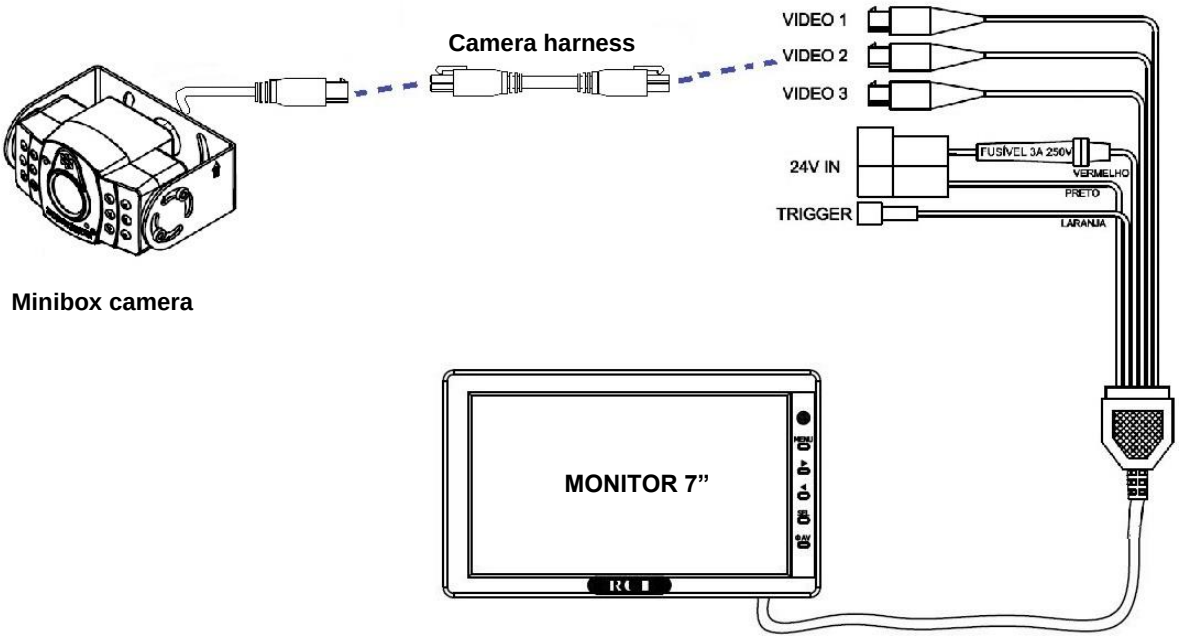

Figure 1.5 – Monitor Diagram 7” MINIFIT connection + Camera

In addition to the cameras, the video signal can be supplied to the Monitor by several other products, such as DVDs, Digital TV Receivers, DVRs, Video Distributors and Video Selectors.

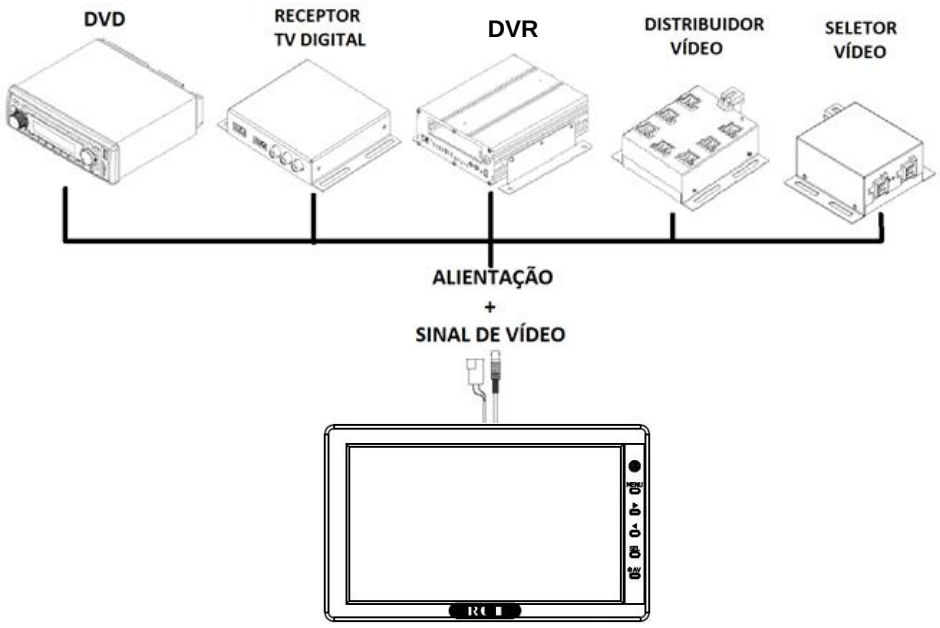

Figure 1.6 – Diagram connection from other video sources to 7" Monitor (Example only)

4. CONFIGURATION

REI DO BRASIL Monitors have options that allows you to customize the images shown on the screen.

The Monitor buttons on the front panel are showed as follows:

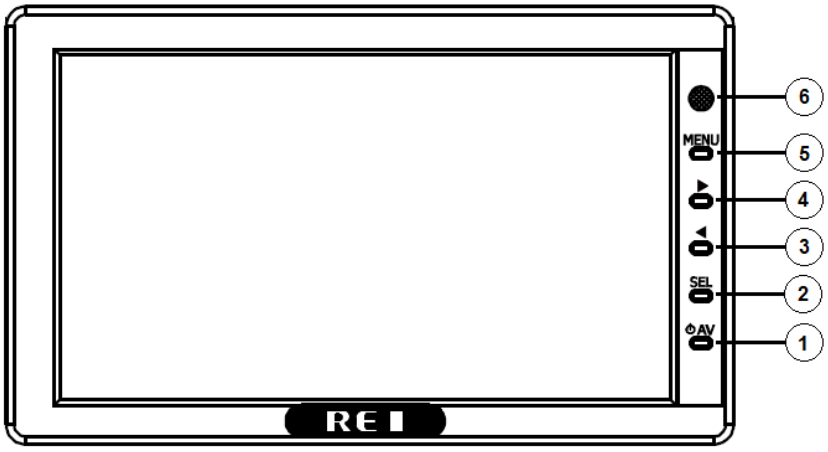

Figure 1.7 – 7" Monitor Panel

1) Power: On / Off.
2) Sel: Alternate between the video channels and selects the Menu options.
3) (◄): Alternate between the Menu options to left.
4) (►): Alternate between the Menu options to right.
5) Menu: Access the configuretion Menu.
6) IR Sensor: Responsable for receiving the signal from Remote Control.

4.1. PICTURE

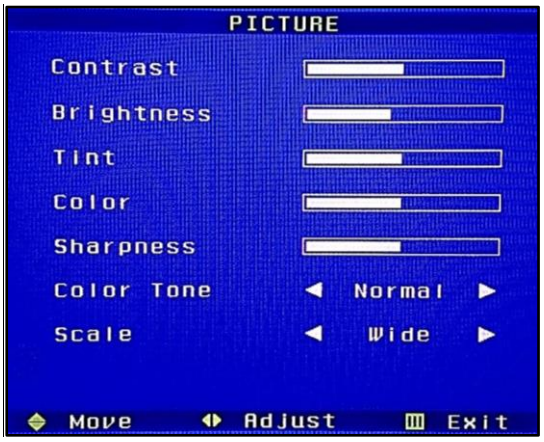

Figure 1.8 – Configuretion Screen Picture

Contrast: Allows you to adjust the contrast of the image.

Brightness: Allows you to adjust the brightness of the image, the intensity of the black tones on the screen.

Tint: Allows you to adjust the red and green tones.

Color: Allows you to adjust the intensity of the colors, responsible for the nuances that will be displayed.

Sharpness: Allows you to adjust the sharpness of the image on the screen.

Color Tone: Allows you to adjust the color temperature on the screen. It has three types of settings: “Normal”, “Warm” and “Cool”.

Scale: Shows the scale used in the monitor, which in this case is Widescreen. No changes allowed.

4.2. FUNCTION

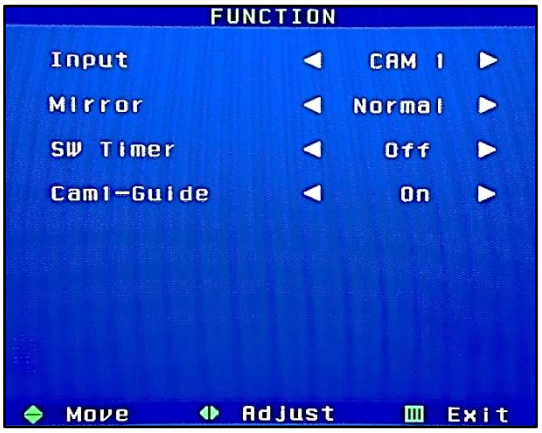

Figure 1.9 – Configuretion Screen

Input: Indicates which channel is active at the time the user entered the settings.

Mirror: This function allows the image to be reversed to "Mirror" mode, this helps the obstacles on the left side of the vehicle also appears on the left side of the Monitor. The camera can be installed to view the front and / or rear of the vehicle, and with this function it is possible that the image is always compatible with the sides that the obstacles are. The options are: Normal, H-Flip (Horizontal) and V-Flip (Vertical).

SW TIMER: Allows you to set the speed at which the images of the inputs of "VIDEO 02" and "VIDEO 03" are toggled together. It has pre-set values range from "OFF" to "08".

Cam1-Guide: This function allows a better view of the distance from the obstacle behind the vehicle. It inserts lines in the image that assists the driver during the maneuvers.

4.3. OSD

Figure 2.0 – Configuretion screen OSD

Language: Shows the user the language that is being used in the monitor.

Duration: Adjust the OSD Menu duration time.

Halftone: Adjust the transparency of the OSD menu.

Information: Allows you to check the image information.

Memory Recall: Returns the settings to the factory defaults.

5. TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	ACTION
Monitor does not turn On / Off.	1- There is no Power coming from the Power harness. 2- The Power fuse could be open / damaged.	1.1 – Check if the battery is supplying power (V +). Use a multimeter on this check. 1.2 – Make sure the harness is not broken at any point. 1.3– Verify if all connectors and terminals are in good conditions. 2.1 – Check the fuse conditions by visual inspection or using a multimeter.
Monitor without image.	1- The device responsible for sending the signal is disconnected or damaged. 2- Output auxiliary problem (12V out).	1.1- Turn On the device (Camera, DVD, Digital TV Receiver, DVR, Distributor, Dial, etc.). 1.2- Check if the monitor's whip tracks are conducting. 2.1- Check that the auxiliary output is supplying 12V to the cameras. Use a multimeter on this check.
Monitor with noises on the screen.	1- Monitor or whip shorted to vehicle structure.	1.1- Check the insulation of the power and video connectors that should have been insulated when attaching the monitor. If necessary, rework these insulation.

Tabela 1.1 – Table Solution Problems

For better support, please contact REI DO BRASIL Technical Assistance.