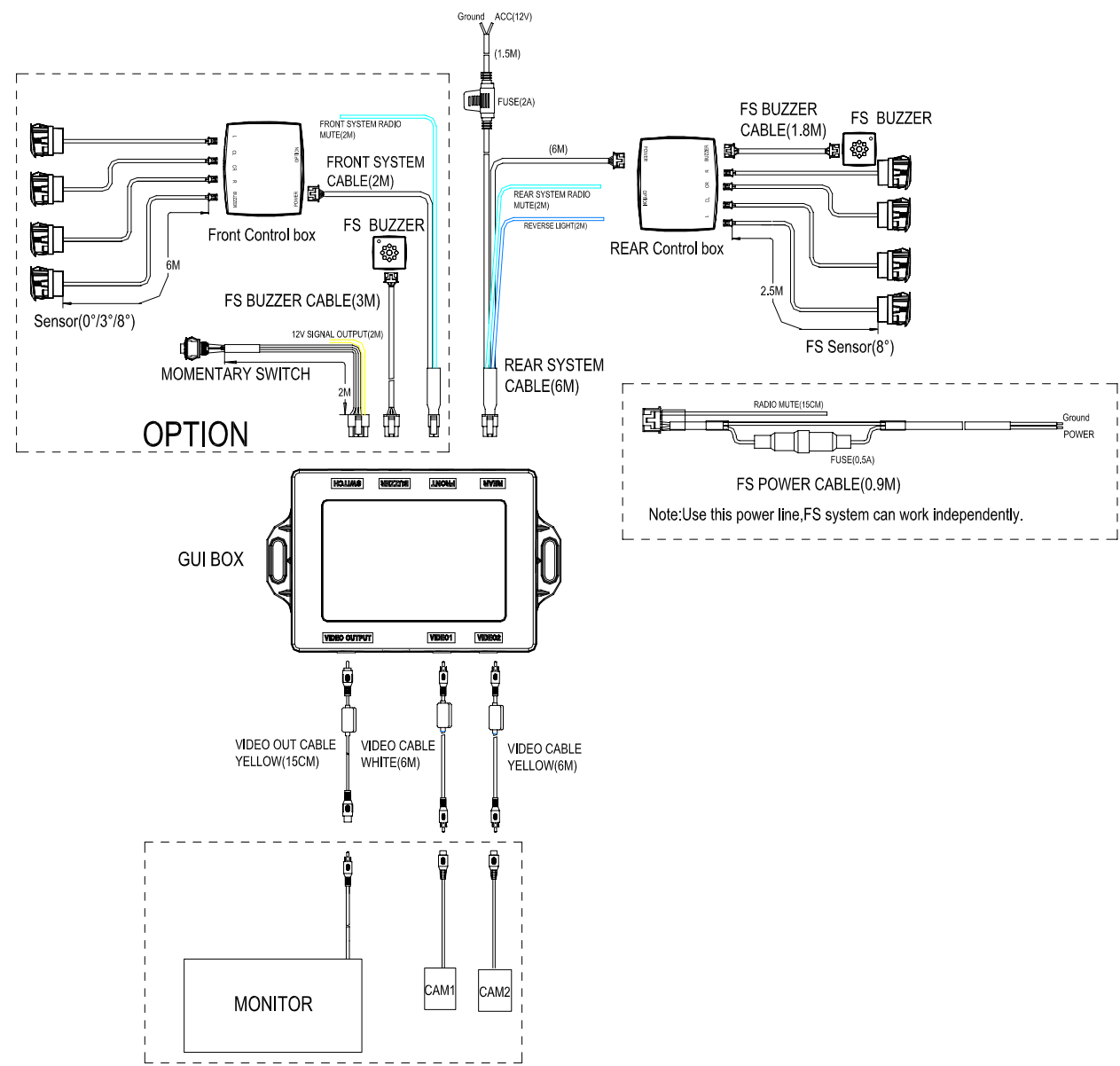


# 1 Principle of system working



## 2 Components

NO.	Name	Quantity
1	GUI BOX	1
2	MOMENTARY SWITCH	1

3	FRONT SYSTEM CABLE(2M)	1
4	REAR SYSTEM CABLE(7M)	1
5	VIDEO CABLE(2M)	1
6	VIDEO CABLE(7M)	1
7	FS BUZZER CABLE(3M)	1

### 3 Specification

NO.	Item	Parameter
1	Operation Voltage	DC 9.6V--16V
2	Current consumption	MAX300mA
3	Operation temperature	-30°C----+80°C
4	Storage temperature	-40°C---+85°C
5	TV system	NTSC
6	Tone Volume	Hi: 85d B      Low:80 d B (30cm/12V)
7	Tone frequency	1000 ± 200HZ

### 4 System function

#### 4.1 Activation:

4.1.1. System will stand-by after car engine is started,

4.1.2. Shift to Reverse gear position, both reverse sensors and front sensors start to work, Monitor shows image from camera 1. When shifted to other gears, all sensors and camera 1 are deactivated.

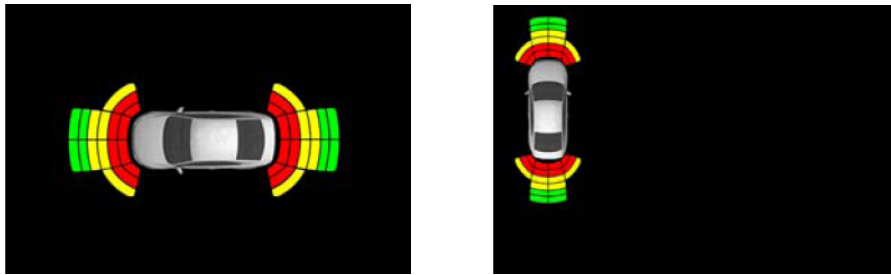
4.1.3. Press momentary switch to manually turn on front sensors and camera 2, OSD unit deliver 12V signal from output wire. Press the switch again to turn off front sensors and camera 2.

4.1.4. Reverse gear and switch trigger OSD unit separately, but reverse gear has higher priority.

#### 4.2 Screen Display:

4.2.1. When vehicle is shifted to reverse gear, monitor will show camera image and GUI

visual effect (on top left); if camera is not connected, Monitor will show black background and display GUI visual effect in the center. GUI doesn't function in "D" or "N" gear.



4.2.2. For 2-sensor operation mode, sensors are supposed to be connected to port CL/CR on FS unit, GUI will display two central sensors' pattern. GUI doesn't support 3-sensor mode.

## 4.3 Sensor-diagnosis

Once activated, GUI-OSD unit starts its diagnosis for sensor:

1. each beep stands for one defective sensor.
2. low pitch sound is for front sensors; while high pitch sound is for rear sensors;
3. when both front and rear sensors are connected, front sensor diagnosis is conducted first.
4. Note: if sensors only connect to CL/CR ports, FS unit will view this situation as 2-sensor operation mode and won't deliver defective warning beeps.

## 4.4 Detection Sections

There will be at most six curves showed on the screen, their section is 180-150-120-90-60-40-00 (in cm), .

When an object is detected, system will deliver alarming sound as well as graphic warning by showing the curves on the screen.

Sound alarm:


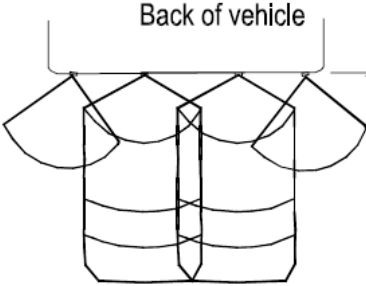

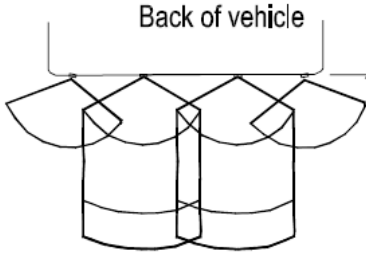
- As obstacle gets closer, system delivers higher frequency alarms, the beep becomes solid sound when it gets closer than 60cm.
- Low pitch for front sensors, high pitch for rear sensors.

## 4.5 Switch Function

Switch 1:

Up: 4 sensors detect.  
 Down: 3 sensors detect.  
 Switch 2:  
 Up: fit size 16:9 monitor.  
 Down : fit size 4:3 monitor.

## 4.6 Detection Range Selection (switch on sensor control unit)

option (red dip switch)	Detection range
switch1 "up"   * Default setting	 <p>Back of vehicle</p> <p>0.0M constant beep and red LED lighting (when hazard's distance closer than 60cm)</p> <p>0.6M</p> <p>0.9M 1/4 SEC continuant beep and red LED flashing (60cm - 120cm)</p> <p>1.2M</p> <p>1 SEC continuant beep and red LED flashing</p> <p>1.8M</p>
Switch1 "down" 	 <p>Back of vehicle</p> <p>0.0M constant beep and red LED lighting</p> <p>0.6M</p> <p>1/4 SEC continuant beep and red LED flashing</p> <p>1.2M</p> <p>1 SEC continuant beep and red LED flashing</p> <p>1.5M</p>

## 4.7 3/4-sensor Mode Selection (switch on sensor control unit)

When Switch 2 is "UP", FS is in 4-sensor mode, please refer to 4.6 for detection pattern.

When Switch 2 is "down", FS is in 3-sensor mode, sensors should be connected to port R, CR, L. Detection range is:  
 60-120-180 (switch 1 is "UP") or 60-120-150 (switch 1 is "DOWN") .

This device complies with part 18 of the FCC Rules.

This equipment has been tested and found to comply with Part 18 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 undesired operation.

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

NOTE: 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."