

Vehicle Safety Video
System

2.4 GHZ Wireless Camera Control Box

2.4 GHZ Wireless Camera

LCD Monitor



FEATURES

Wireless Camera Control Box

KEY FUNCTIONS

1. This system is designed with ultrahigh frequency channel rated at 2.4GHz, which is very close to microwave bands.
2. The frequency bands range from 2400MHz to 2483MHz (ISM Band).
3. Aside from the ISM 2.4G within the system, there is another ISM dual-direction control channel by using ISM433 channel to control over 2.4G channel for camera signaling and the frequency is automatically swappable to assure of more stable signaling.
4. The ISM 2.4G is designed with analog, while ISM 433 is used for digital control.
5. Within this system, each unit is designed with an ID code. Before operation, please setup the password previously so that users can avoid erroneous operation.

1. Camera 1 indicator and CA1 signal indicator.

2. Channel option key and setup keys for CA1 ID.

3. Camera option key and setup keys for CA2 ID.

4. Camera 2 indicator and CA2 signal indicator.

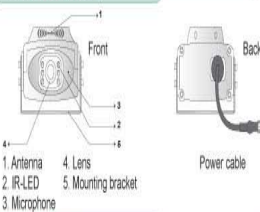


Wireless Camera

KEY FUNCTIONS

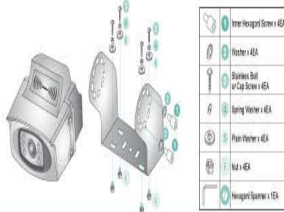
1. The wireless camera is powered by voltage level from 10V-30V and this voltage range is quite different from that of general cameras only rated at 12V. Thus, it is available for automobile application.
2. This camera is designed with internally hidden antenna with the least damage possibility under operation.
 - The camera is automatically turned on when the monitor is turned on.
 - The camera utilizes a CCD image sensor having a high quality picture.
 - The camera automatically adjusts the picture quality with changing in light.
3. Wide field of view : (option)
 - 95 degree in the horizontal plane.
 - 120 degree in the diagonal plane.
4. Water resistant housing.
5. Operates over a wide temperature range.

CAMERA CONTROLS



INSTALLATION

Adjust the angle of the camera and fasten the screws firmly.



WIRELESS CAMERA SETTING

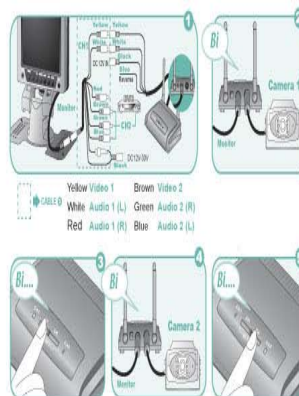
Please connect the camera control box to the dedicated monitor.——Picture 1

Camera 1 Setup :

1. Insert the CA power cords into the receiver box and ID setup hole : whenever it gives off a short beeping sound, immediately after that, the unit is exactly under setup status.——Picture 2
2. Press "CH" key with beeping sound happening and the CA1 indicator stably lamp lights up. It means the setup completeness of CA1.——Picture 3

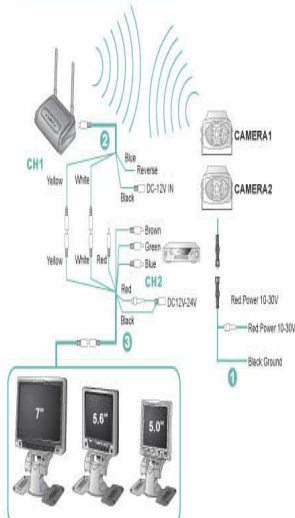
Camera 2 Setup :

1. Insert the CA power cords into the receiver box and ID setup hole : whenever it gives off a long beeping sound (approximately 3 seconds of duration), the unit is therefore exactly under setup status.——Picture 4
2. Press "CH" key with beeping sound happening and the CA2 indicator stably lamp lights up. It means the setup completeness of CA2.——Picture 5



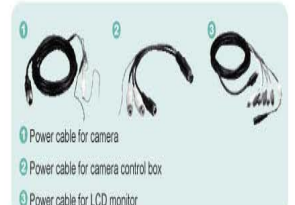
CONNECT

WIRING DIAGRAM (1)



CABLE

For LCD Monitor



CAMERA CONTROLS USING

CA1 Key



CA2 Key

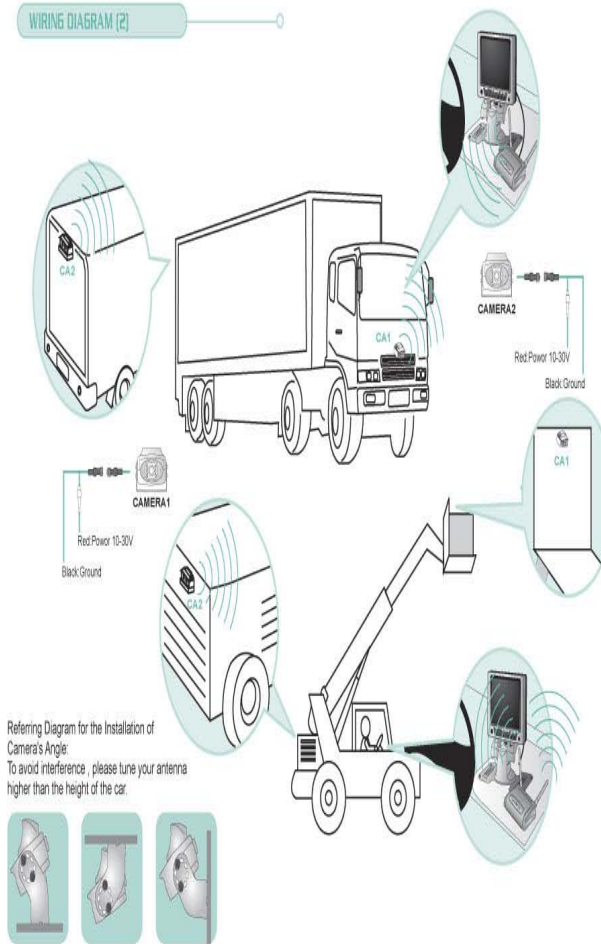


CH Key

Whenever the screen is blinking like figure (a), users can switch to the clear channel by pressing the CH key.



WIRING DIAGRAM (2)

Referring Diagram for the Installation of Camera's Angle:
To avoid interference, please tune your antenna higher than the height of the car.

SPECIFICATIONS

2.4 GHZ Wireless

Camera Control Box — W-2400R

2.4GHz Receiving Band	2400MHz-2483MHz (ISM band)	AC/DC Supply
2.4GHz Channel Frequency	CH1: 2414MHz CH2: 2432MHz CH3: 2450MHz CH4: 2468MHz	Power cable 1EA
2.4GHz Channel Setting	By Tied Switch	Touch Fasteners 1EA
2.4GHz RF Sensitivity	-80dBm (min.)	
433 MHz Transmission Frequency	433.92 MHz or 434.33 MHz	
433 MHz RF Output Power	For FCC or R&TTE	
433 MHz Receiver Sensitivity	-95dBm (min.)	
Control Data Modulation	FSK	
Control Data Communication Type	Half-Duplex	
Camera Setting		
CAVCA2 Camera Selection	Normal-DIP Switch	
CAVCA2 Camera Mirror Setting	Reverse Gear auto Change to CA1	
CAVCA2 Camera Mirror Setting	By DIP Switch	
Power Supply		
Supply Voltage	DC12V	
Supply Current	≤350mA	

Monitor(5.6" LCD MONITOR)

Display Type	TFT LCD Panel for Input Terminals
Screen Size	5.6 inch
Active Area	113.28 (W) × 64.708 (H) mm
Screen Color	Full-Colors
Resolution	960 (H) × 234 (V) dots
Brightness	250 cd/m²
Display Driver	TFT Active Matrix System
Display Frequency	NTSC: 1H=15.73KHz 1V=50Hz PAL: 1H=15.63KHz 1V=50Hz
Back light	Cold Cathode Fluorescent Tube
Operating Voltage	DC12V (11-30V)
Power Consumption	12W 0.5A
Key Functions	
Video Control	Power, Channel
Reverse (Mirror), Color, Bright	AC/DC Supply
Contrast, Audio Control (VCL), VOL, Earphone	Stand and tray 1EA Screw kit 1EA
Video	1/16p/750mm
Audio Input	350 mV RMS
Audio Output	1W x 2 @ 8 ohms

Wireless Camera(Color Outdoor Mounting Camera)

—CA-2400TC

2.4GHz Receiving Band	2400MHz-2483MHz (ISM Band)	AC/DC Supply
2.4GHz Channel Frequency	CH1: 2414MHz CH2: 2432MHz CH3: 2450MHz CH4: 2468MHz	Camera Bracket 1EA
2.4GHz Channel Setting	By Control Box @Reverse side	Screw kit 1EA
2.4GHz RF Output Power	For FCC or R&TTE	Power Cable 1EA
Video Modulation Type	FM	
Audio Modulation Type	FM-FM	
433MHz Transmission Frequency	433.92 MHz or 434.33 MHz	
433MHz RF Output Power	For FCC or R&TTE	
433MHz Receiver Sensitivity	-95dBm (min.)	
Control Data Modulation	FSK	
Control Data Communication Type	Half-Duplex	
Power Supply		
Supply Voltage	DC12-24V	
Supply Current	≤350mA	

Color Camera

Image Sensor	1/3"CCD CCD	AC/DC Supply
Picture Elements	NTSC: 510(H) × 482(V), PAL: 500(H) × 482(V)	Camera Bracket 1EA
Scanning System	NTSC: 2 Lines 2 Interface, PAL: 2 Lines 2 Interface	Screw kit 1EA
Min. Illumination	1 Lux / F1.2	Power Cable 1EA
Electronic shutter	1/60, 1/50, 1/100, 1/200	
Sync. System	Internal	
Scanning Frequency	NTSC: 15.750Hz, PAL: 15.625 Hz	
Horizontal Resolution	330TV Lines	
SN Ratio	45dB or more (AFC Off)	
Video Output Signal	VBS 1.0Vp-p/75Ω	
Shock Resistance	10G	
Lens	Angular Diagonal 120° F3.0mm ±5%	
Power Supply	DC12V ±1V	
Power Consumption	200mA	
Audio Output	2V / 600Ω	
Operating Temp	-20°C to 55°C	
Weight	280g	
Dimension	105 × 65 × 65 (W × H × D) mm	

Vehicle Safety Video System

- **2.4 GHZ** Wireless Camera Control Box
- **2.4 GHZ** Wireless Camera
- LCD Monitor



2.4 GHZ
Wireless Camera
Control Box



2.4 GHZ
Wireless Camera

FEATURES

Wireless Camera Control Box

KEY FUNCTIONS

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2. Channel option key and setup keys for CA1 ID.
3. Camera option key and setup keys for CA2 ID.
4. Camera 2 indicator and CA2 signal indicator.



1. Antenna 1.
2. Mirror & Normal Setup.
3. Terminals to connect the dedicated monitor.
4. The setup connection hole for Camera ID.
5. Antenna 2.

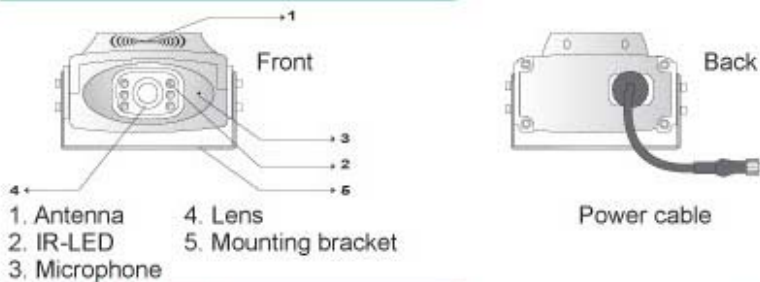


Wireless Camera

KEY FUNCTIONS

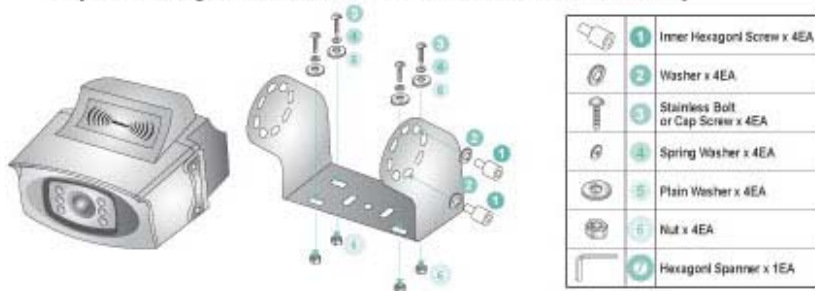
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 - Wide field of view : (option)
96 degree in the horizontal plane.
120 degree in the diagonal plane.
 - Water resistant housing.
 - Operates over a wide temperature range.

CAMERA CONTROLS



INSTALLATION

Adjust the angle of the camera and fasten the screws firmly.



WIRELESS CAMERA SETTING

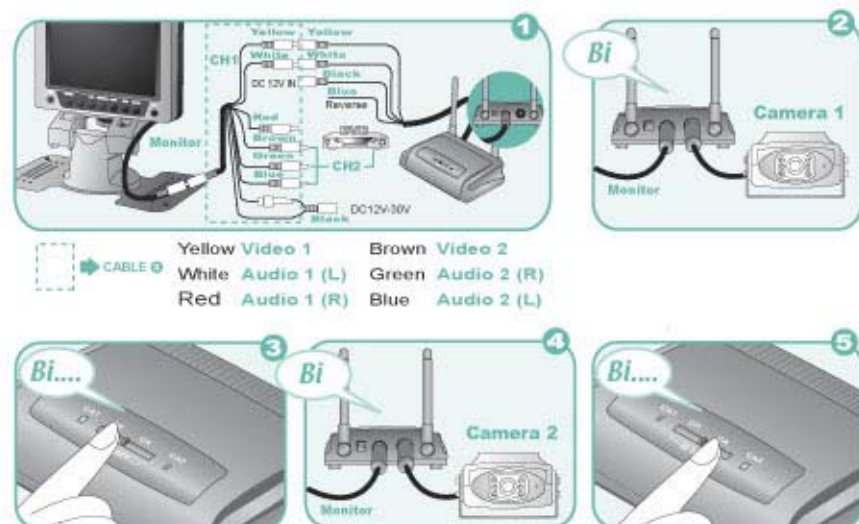
Please connect the camera control box to the dedicated monitor.-----picture 1

Camera 1 Setup :

1. Insert the CA power cords into the receiver box and ID setup hole : whenever it gives off a short beeping sound, immediately after that , the unit is exactly under setup status.-----Picture 2
2. Press "CH"key with beeping sound happening and the CA1 indicator stably lamp lights up . It means the setup completeness of CA1.-----Picture 3

Camera 2 Setup :

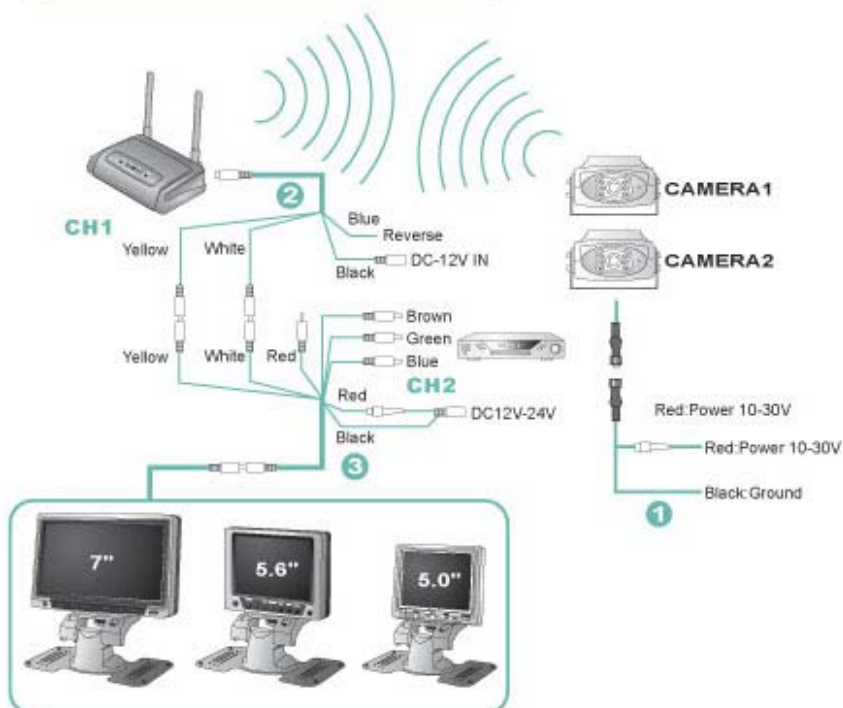
1. Insert the CA power cords into the receiver box and ID setup hole : whenever it gives off a long beeping sound (approximately 3 seconds of duration), the unit is therefore exactly under setup status.-----Picture 4
2. Press "CH"key with beeping sound happening and the CA2 indicator stably lamp lights up . It means the setup completeness of CA2.-----Picture 5



Car Safety Video System

CONNECT

WIRING DIAGRAM [1]



CABLE

For LCD Monitor



- ① Power cable for camera
- ② Power cable for camera control box
- ③ Power cable for LCD monitor

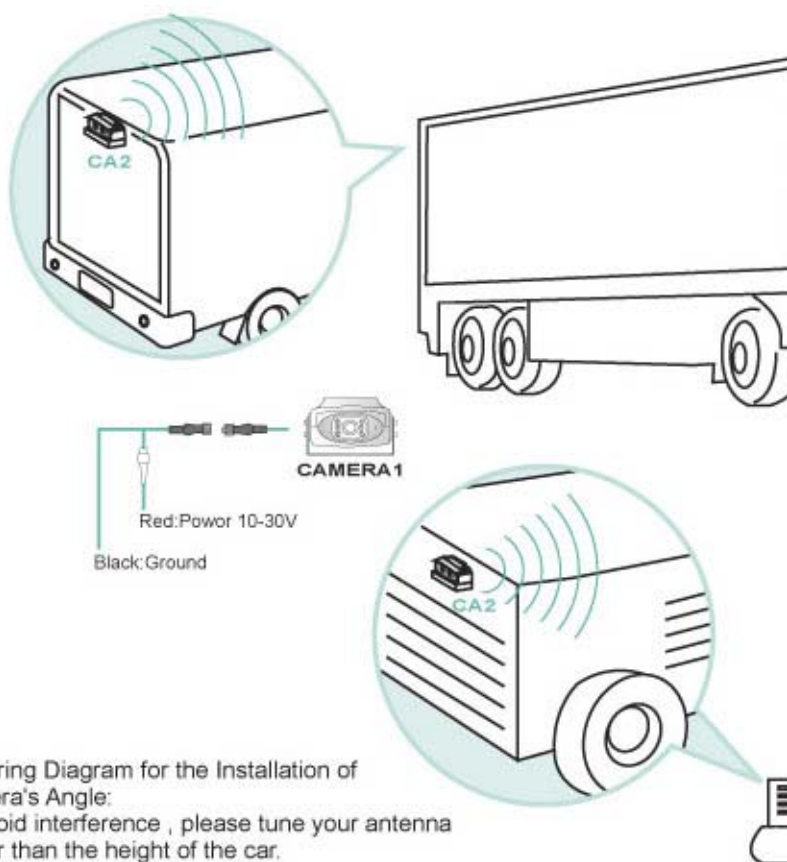
CAMERA CONTROLS USING

CA1 Key*CA2 Key**CH Key*

Whenever the screen is blinking like figure (a), users can switch to the clear channel by pressing the CH key.



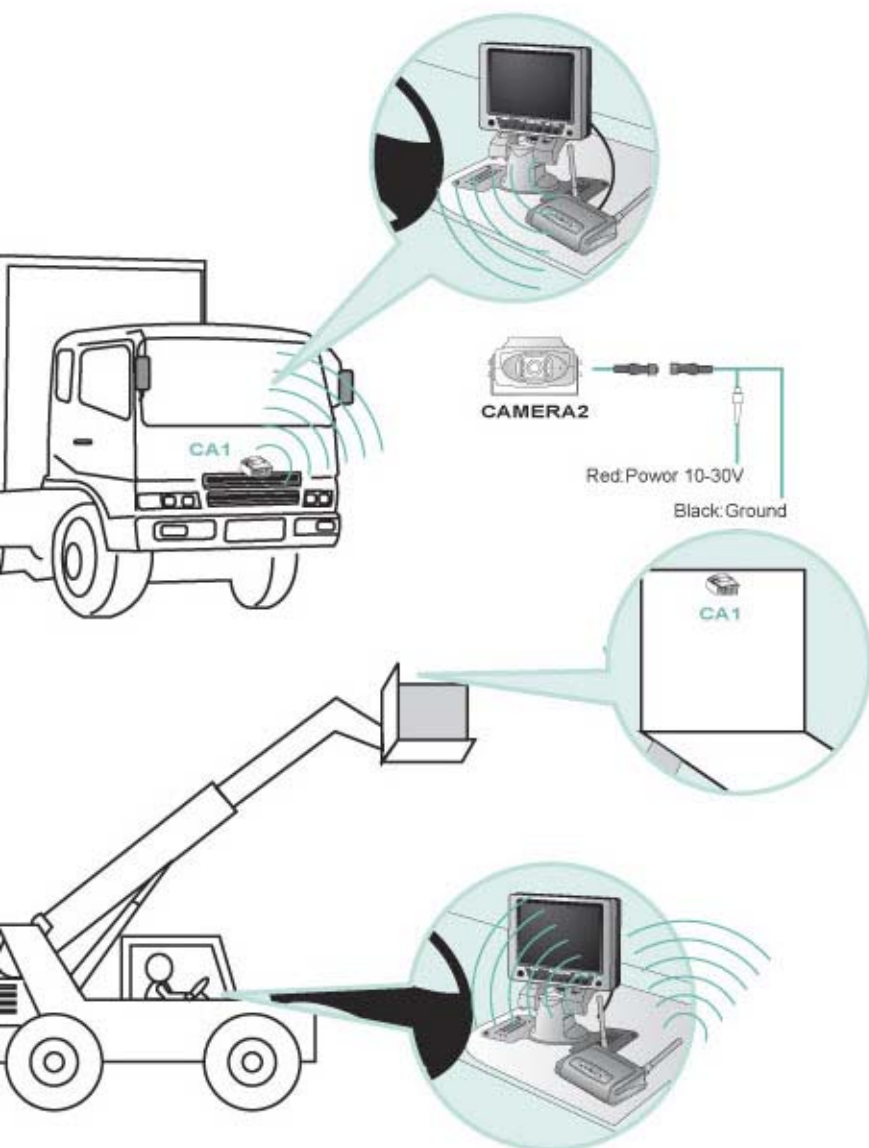
WIRING DIAGRAM (2)



Referring Diagram for the Installation of
Camera's Angle:

To avoid interference, please tune your antenna
higher than the height of the car.





SPECIFICATIONS

2.4 GHZ Wireless

Camera Control Box --- W-2400R

2.4GHZ Receiving Band	2400MHZ~2483MHZ (ISM band)	ACC'Y Supplied
2.4GHZ Channel Frequency	CH1: 2414MHZ CH2: 2432MHZ CH3: 2450MH CH4: 2468MHZ	Power cable 1EA
2.4GHZ Channel Setting	By Tact Switch	Touch Fasteners 1EA
2.4GHZ RF Sensitivity	-80 dBm (min.)	
433 MHZ Transmission Frequency	433.92 MHZ or 434.33 MHZ	
433 MHZ RF Output Power	For FCC or R&TTE	
433 MHZ Receiver Sensitivity	-95dBm (min.)	
Control Data Modulation	FSK	
Control Data Communication Type	Half-Duplex	
Camera Setting		
CA1/CA2 Camera Selection	Normal-DIP Switch Reverse Gear auto Change to CA1	
CA1/CA2 Camera Mirror Setting	By DIP Switch	
Power Supply		
Supply Voltage	DC12V	
Supply Current	≤350mA	

Monitor(5.6" LCD MONITOR)

Display Type	TFT LCD Panel for JEMITEK(CHI MEI) J560Q1-01	Input Terminals
Screen Size	5.6 inch	Mini Din Cable (Power, Ground, RCA)
Active Area	113.28(W) × 84.708(H) mm	Input Signal
Screen Color	Full-Colors	NTSC/PAL Auto Switching
Resolution	960 (H) × 234 (V) dots	Operation Temperatures
Brightness	250 cd/m ²	-10~+65°C
Display Driver	TFT Active Matrix System	Storage Temperatures
Display Frequency	NTSC: fh=15.73KHz, fv=60Hz PAL: fh=15.63KHz, fv=50Hz	-20~+85°C
Back light	Cold Cathode Filament Tube	Humidity
Operating Voltage	DC12V (11-30V)	10~90%RH
Power Consumption	12 V/ 0.5A	Overall Dimension
Key Functions	Video Control: Power, Channel Reverse (Mirror), Color, Bright Contrast Audio Control: VOL+, VOL- , Earphone	148 (W) × 124 (H) × 35 (D) mm
Video	1Vp-p/75ohm	Weight
Audio Input	350 mv Rms	400gm
Audio Output	1w x 2 @ 6 ohms	ACC'Y Supplied
		Stand and tray 1EA
		Screw kit 1EA
		Power cable 3EA

Wireless Camera(Color Outdoor Mounting Camera)**---CA-2400TC**

2.4GHZ Receiving Band	2400MHZ~2483MHZ (ISM Band)
2.4GHZ Channel Frequency	CH1: 2414MHZ CH2: 2432MHZ CH3: 2450MHZ CH4: 2468MHZ
2.4GHZ Channel Setting	By Control Box @Reote side
2.4GHZ RF Output Power	For FCC or R&TTE
Video Modulation Type	FM
Audio Modulation Type	FM-FM
433MHZ Transmition Frequency	433.92 MHZ or 434.33 MHZ
433MHZ RF Output Power	For FCC or R&TTE
433MHZ Receiver Sensitivity	-95dBm (min.)
Control Data Modulation	FSK
Control Data Communication Type	Half-Duplex
Power Supply	
Supply Voltage	DC12~24V
Supply Current	≤350mA

Color Camera

Image Sensor	1/3"COLOR CCD	ACC'Y Supplied
Picture Elements	NTSC: 510(H) x 492(V) , PAL: 500(H) x 582(V)	Camera Bracket 1EA
Scanning System	525 TV Lines 2:1Interlace , 625 TV Lines 2:1Interlace	Screw kit 1EA
Min. Illumination	1.0Lux / F1.2	Power Cable 1EA
Electronic shutter	1/60(1/50)~1/100,000	
Sync. System	Internal	
Scanning Frequency	NTSC: 15,750Hz , PAL: 15,625 Hz	
Horizontal Resolution	330TV Lines	
S/N Ratio	45dB or more (AGC Off)	
Video Output Signal	VBS 1.0Vp-p/75Ω	
Shock Resistance	10G	
Lens	Angular Diagonal 120° F=3.0mm ±5%	
Power Supply	DC12V±1V	
Power Consumption	200mA	
Audio Output	2V / 600Ω	
Operating Temp	-20°C to 55°C	
Weight	280g	
Dimension	105 x 65 x 65 (W x H x D) mm	

Car Safety Video System

Made in Taiwan