

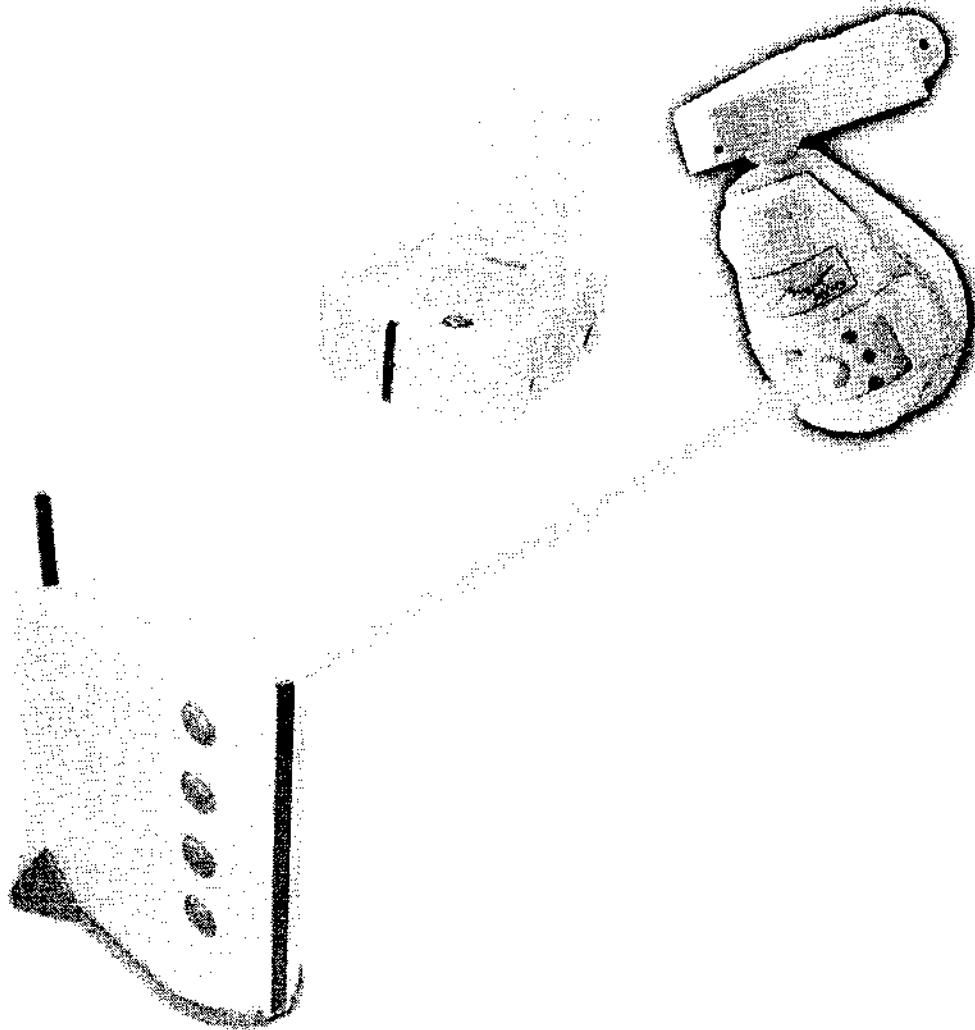
**PRO-Q**

# **RF HOME SECURITY SYSTEM**

**M9310 RF 2.4GHz TRANSMITTER**

**M9320 RF 2.4GHz RECEIVER**

**M9500 HIGH SENSITIVITY CAMERA**



## **INSTRUCTION MANUAL**

**PLEASE READ ALL INSTRUCTIONS IN THIS MANUAL BEFORE USING THE PRODUCT  
AND KEEP IT IN A SAFE PLACE FOR FURTHER REFERENCE**

# INDEX

## Dear Customer

Thank you for purchasing this product. For optimum performance and Safety, please read these operating instructions carefully.

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# BEFORE INSTALLATION

## M9310 FEATURE

M9310

M9310 RF 2.4GHZ TRANSMITTER are with 4 channels for choice and could connect the following cameras to monitor via your TV.

Multi applications for security of home, office, shop, etc..

\*Optional cameras for M9310

### 1. M9500A (NTSC) / M9500B (PAL) COLOR PIR CAMERA

With built-in : 1. High sensitive microphone

2. High resolution color camera

3. High sensitive infrared motion detector and with the "ding-dong" notice when triggered.

### 2. M9500C (EIA) / M9500D (CCIR) B/W PIR CAMERA

With built-in : 1. High sensitive microphone

2. High resolution camera with IR LED to enhance the view in dark

3. High sensitive infrared motion detector and with the "ding-dong" notice when triggered.

### 3. M9500E (NTSC) / M9500F (PAL) COLOR CAMERA

With built-in : 1. High sensitive microphone

2. High resolution color camera

### 4. M9500G (EIA) / M9500H (CCIR) B/W CAMERA

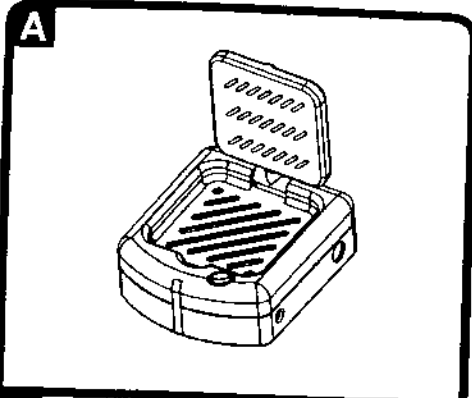
With built-in : 1. High sensitive microphone

2. High resolution camera with IR LED to enhance the view in dark

# BEFORE INSTALLATION

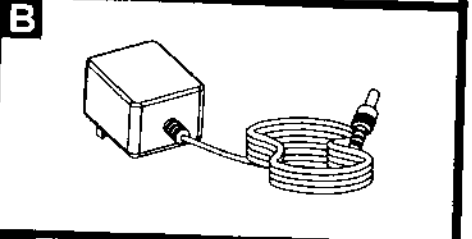
## CONTENTS OF PACKAGE

M9310



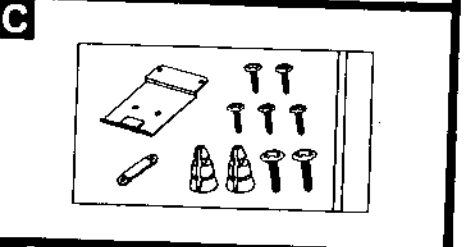
Check the packing carton for these accessories.

**A** M9310 RF Transmitter



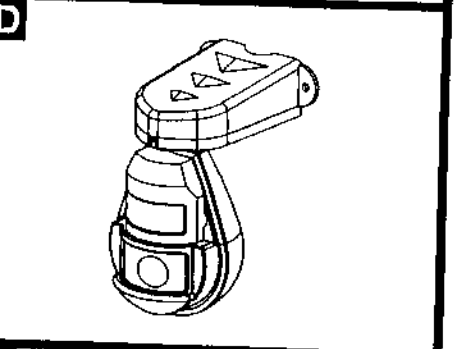
**B** AC Adapter (DC12V 300mA)

※The drawing of AC Adapter will change with different countries.

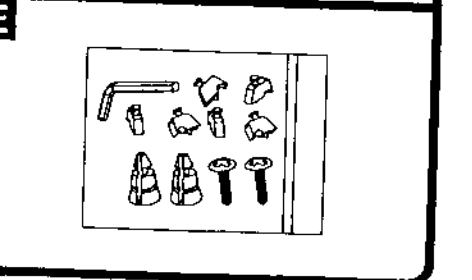


**C** Fixing parts includes:

1. Fixing metal plate X 1
2. Fixing parts for metal plate X 1
3. Fixing screw for metal plate X 2
4. Screw X 2
5. Wall mounted parts X 2
6. Small Screw X 3



**D** M9500 High sensitive Camera

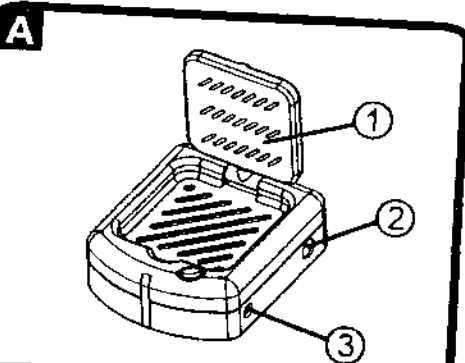


**E** Fixing parts for installation camera includes:

1. Screw X 2
2. Wall mounted parts X 2
3. Nails X 5
4. L-shape adjusting tool for fixing the view of camera X 1

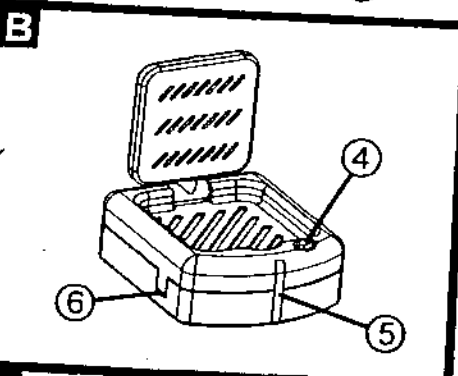
# BEFORE INSTALLATION

## DESCRIPTION



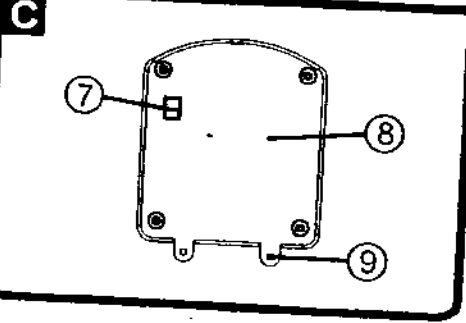
### Main Unit A

- ① Flat antenna
- ② CAMERA IN
- ③ Socket for connecting power  
(DC 12V 300mA)



### Main Unit B

- ④ Power switch (POWER)
- ⑤ Power indicator
- ⑥ Channel switch (CH)  
4 3 2 1



### Main Unit C

- ⑦ (FAR/NEAR) transmission distance switch
- ⑧ Fixing hole for metal plate
- ⑨ Fixing hole for the rack of metal plate

## NOTE FOR INSTALLATION OF TRANSMITTER AND RECEIVER

To have the best image, please note the following instructions while installing.

1. Don't position too close the microwave oven or heavy load machine.
2. Don't position at the humid environment.
3. The distance between each transmitters and receivers should be equal.
4. Avoid to have the metal boards between transmitters and receivers.

6 RF HOME SECURITY SYSTEM

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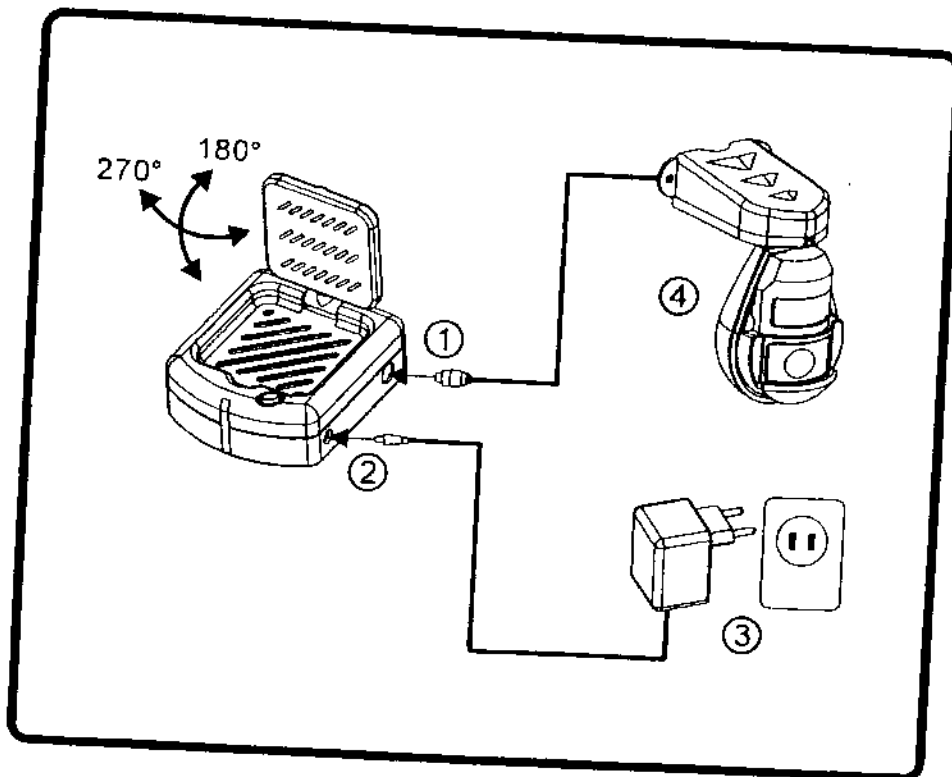
# BEFORE INSTALLATION

## PRE-TESTING

Before installation and mounting the system, please check firstly by connecting the system with TV to pre-test the all functions work well.

M9310

## CONNECTION



- ① Connect the camera with M9310 transmitter.
- ② Connect the AC adapter with M9310 transmitter.

**\*Please note that the AC adapter will change with different country.**

**Please use the one enclosed.**

- ③ Connect with the power supply.
- ④ Adjust the view of camera to the most proper position and fixed it.

(Refer to page 16)

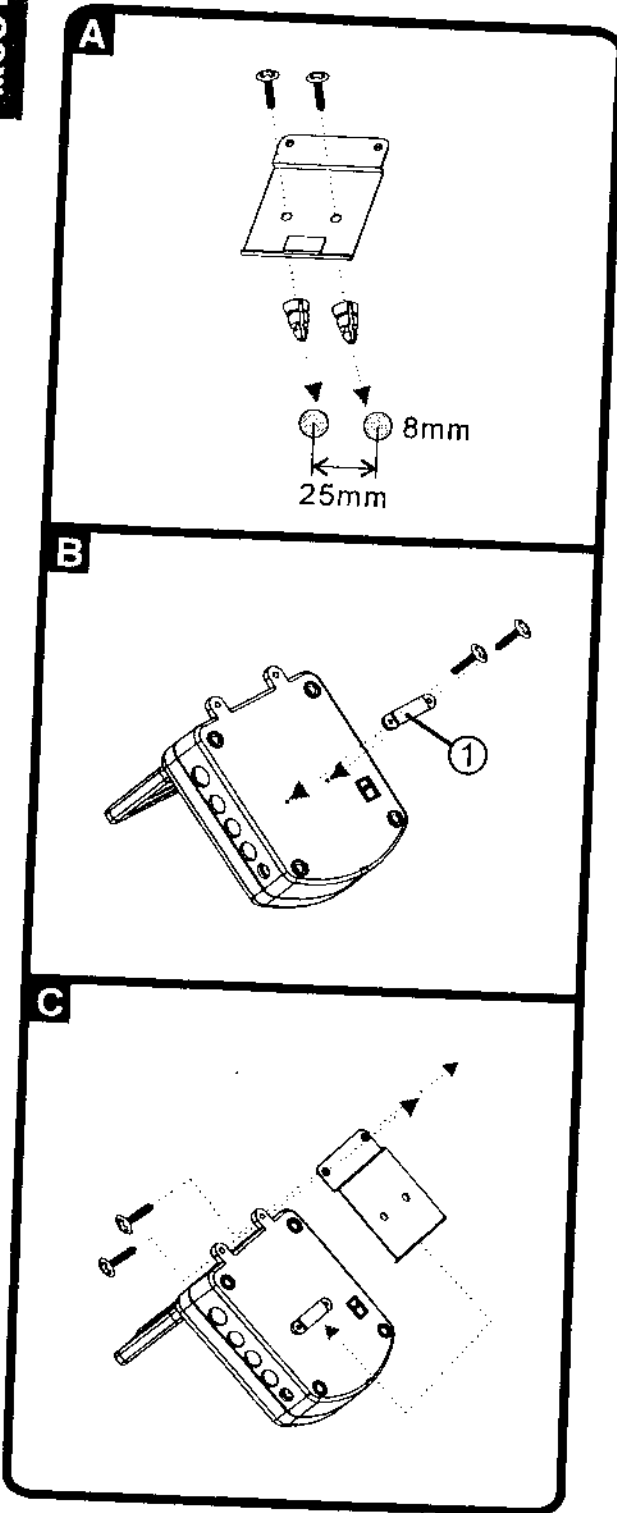
### \*NOTE

1. Pay attention to the direction of the antenna, do not turn it over 270 degrees.
2. The front side of antenna is with stripes. Please pose it to the antenna of receiver.

# BEFORE INSTALLATION

## CONNECTION

M9310



**A** Please fix the metal plate to the proper position.

**B** Fix the part ① on the bottom of transmitter.

**C** Put the transmitter on the metal plate and then fix them by the screws.

8

RF HOME SECURITY SYSTEM

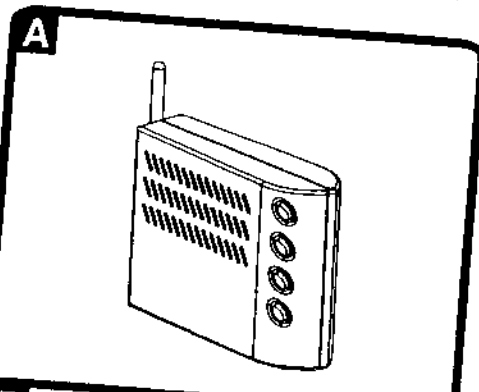
# BEFORE INSTALLATION

## M9320 FEATURE

M9320 RF Receiver with the band antenna, which could receive the signal from different directions. Its functions include, monitoring up-to-4 cameras, switching each channels automatically, setting the switching interval, triggered and recorded automatically with VCR Remote Controller (M9830) when connected with PIR camera. Furthermore the M9320 is with memory function, when power stopped, the prior setting will remain for continuous monitor.

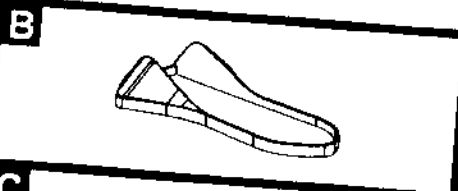
M9320

## CONTENTS OF PACKAGE

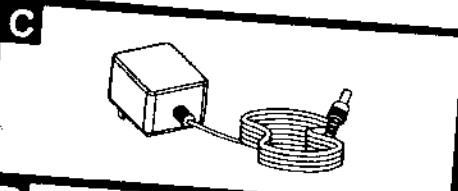


Check the packing carton for these accessories.

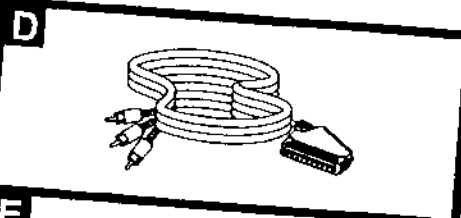
**A** M9320 RF Receiver



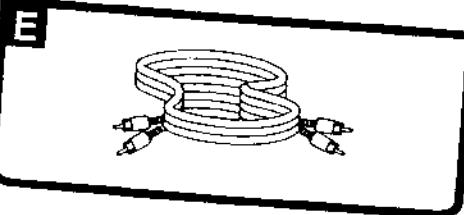
**B** Base for M9320



**C** AC Adapter (DC12V 500mA)  
※ The drawing of AC adapter will change with different country.



**D** SCART Cable (only for CCIR/PAL system)



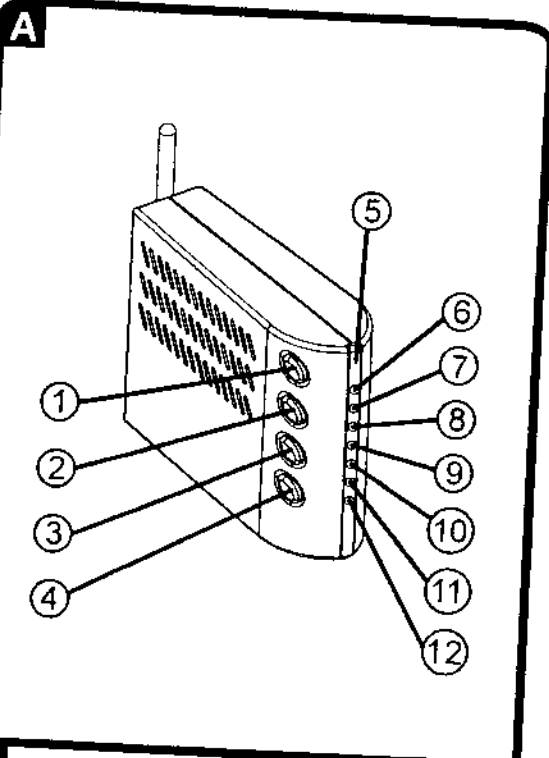
**E** AV Cable (only for EIA/NTSC system)



# BEFORE INSTALLATION

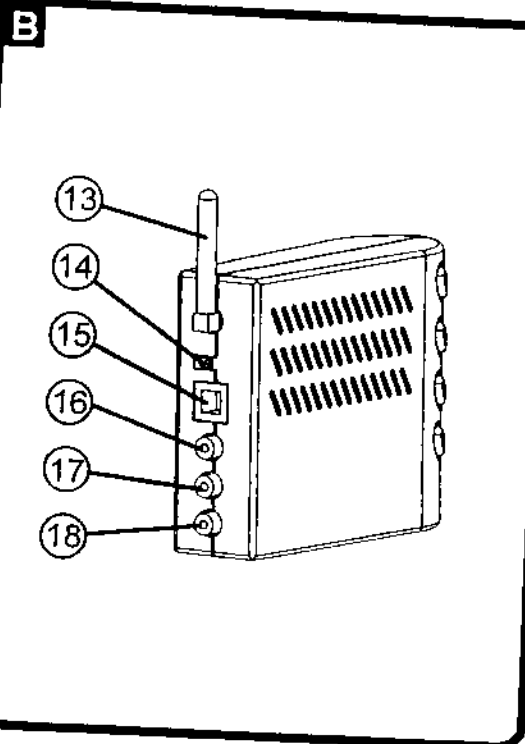
## DESCRIPTION FUNCTION

M9320



### Main Unit A

- ① POWER
- ② EDIT
- ③ AUTO / MANUAL
- ④ BUZZER
- ⑤ INDICATORS
- ⑥ POWER INDICATOR
- ⑦ AUTO MODE INDICATOR
- ⑧ TRIGGER INDICATOR
- ⑨ CH1 INDICATOR
- ⑩ Ch2 INDICATOR
- ⑪ Ch3 INDICATOR
- ⑫ Ch4 INDICATOR



### Main Unit B

- ⑬ ANTENNA (ANT)
- ⑭ DC INPUT SOCKET (DC12V 500mA)
- ⑮ Socket for connecting VCR Remote controller (M9830) (AUX)
- ⑯ VIDEO
- ⑰ AUDIO
- ⑱ TRIGGER

# BEFORE INSTALLATION

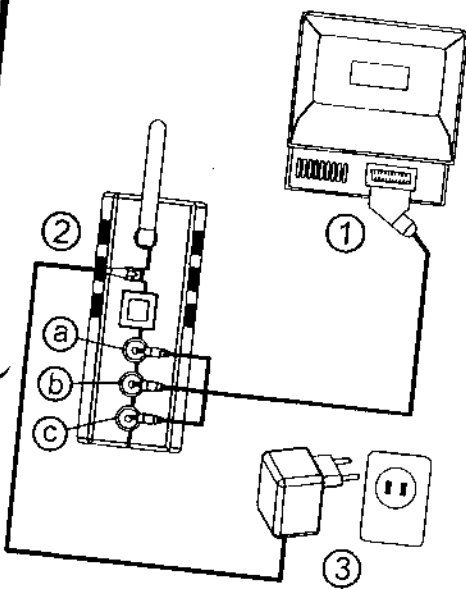
## PRE-TESTING

Before installation and mounting the system, please check firstly by connecting the system with TV to pre-test the all functions work well.

## INSTALLATION

M9320

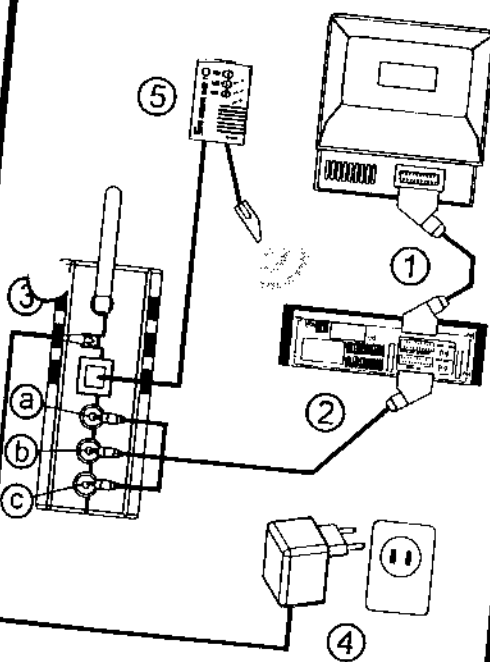
A



### A CCIR/PAL SYSTEM

- ① Connect TV with M9320 receiver
  - a. Yellow to VIDEO IN
  - b. White to AUDIO IN
  - c. Red to TRIGGER
- ② Connect AC adapter
- ③ Connect Power Supply

B



### B WHEN PAL TV CONNECT WITH VCR

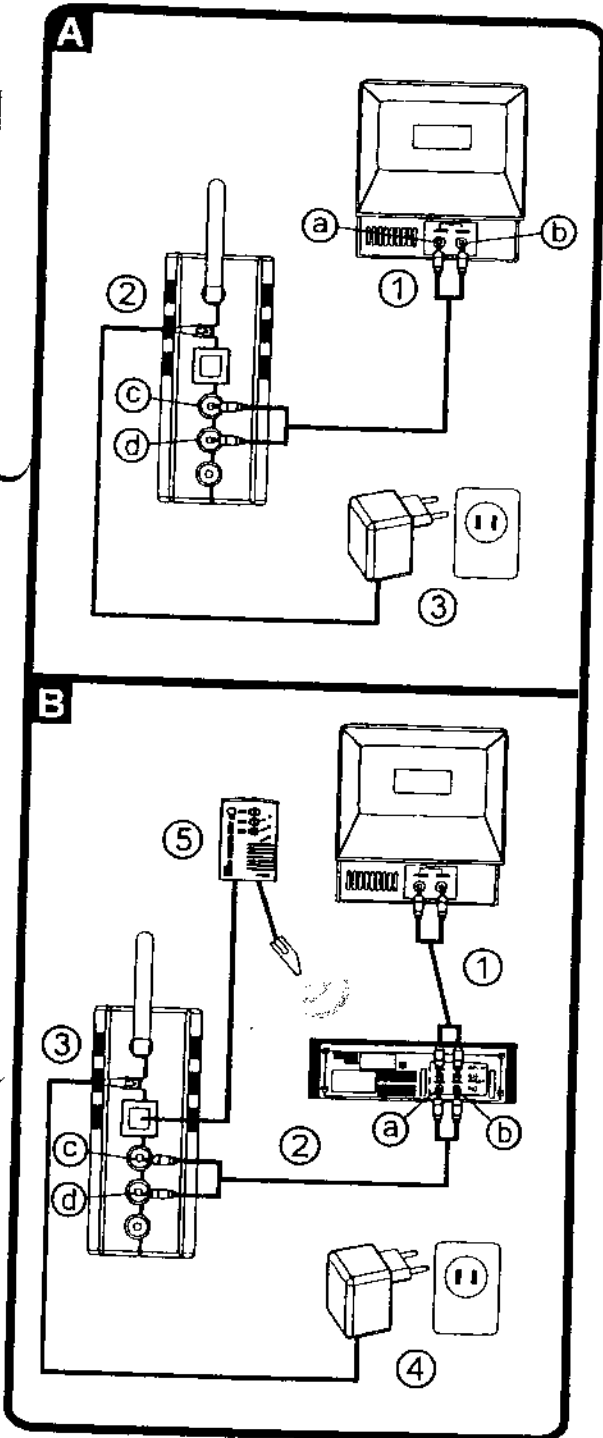
- ① Connect with TV and VCR for CCIR/PAL system
- ② Connect the VCR with M9320 receiver
  - a. Yellow to VIDEO IN
  - b. White to AUDIO IN
  - c. Red to TRIGGER
- ③ Connect AC Adapter
- ④ Connect Power Supply
- ⑤ Connect M9830 VCR Remote controller (optional accessory) and put the IR transmitter to the VCR receiving window.

\*M9830 VCR Remote controller only applicable to PIR camera M9500A/B/C/D.

# BEFORE INSTALLATION

## CONNECTION

M9320



### A EIA / NTSC TV SYSTEM

- ① Connect TV with M9320 receiver
  - a. Yellow to VIDEO IN
  - b. White to AUDIO IN
  - c. Yellow to VIDEO
  - d. White to AUDIO
- ② Connect AC adapter
- ③ Connect Power Supply

### B WHEN EIA/NTSC TV CONNECT WITH VCR

- ① Connect with TV and VCR for EIA / NTSC system
- ② Connect the VCR with M9320 receiver
  - a. Yellow to VIDEO IN
  - b. White to AUDIO IN
  - c. Yellow to VIDEO
  - d. White to AUDIO
- ③ Connect AC Adapter
- ④ Connect Power Supply
- ⑤ Connect M9830 VCR Remote controller (optional accessory) and put the IR transmitter to the VCR receiving window.

\*M9830 VCR Remote controller only applicable to PIR camera M9500A/B/C/D.

# INSTALLATION

## TECHNICAL TERMS

### 1. Manual mode

Choose the channel switching mode by users. Under manual mode, the only the POWER indicators will light on (Refer to page 10) and the AUTO indicator is off.

### 2. Automatic mode

When connected with more than one camera, two channels can be switched automatically in turns upon your choice. Under the automatic mode, the POWER, AUTO, CHANNEL indicators will light on and switch the channel in turns according to your setting.

### 3. Trigger (only for the PIR Camera M9500A/B/C/D)

When detect the movement, the image will be locked in this camera for 50 seconds and the TRIGGER indicator will light on if under the automatic mode. Furthermore, if the alarm notice is switched on, you will hear "ding-dong" notice. After 50 seconds, the channel will continue to switch automatically. While connected with the VCR Remote Controller (M9830), the VCR will be triggered in the same time and record the image. (When connect with PAL TV, then the TV will automatically change to the channel triggered.)

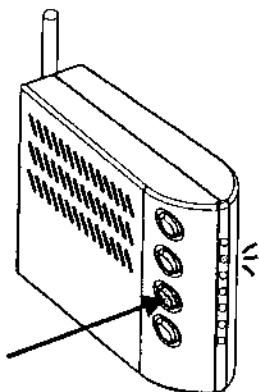
M9320

# INSTALLATION

## MODE SETTING

M9320

**A**



**A** AUTO/MANUAL operation mode :

Push the button "AUTO/MANUAL" till the indicator "AUTO" light on, means setting in the mode "AUTO". When the indicator "AUTO" light off, means setting into the mode "MANUAL".

1. Or

1) :

2) :

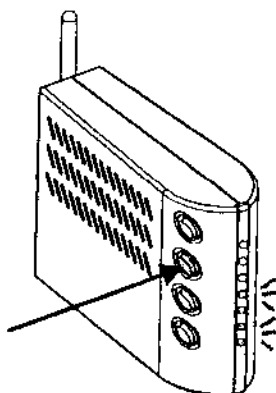
3) :

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**B**



**B** Automatically channels switch :

Switch into the mode "MANUAL" firstly. Push the button "EDIT", then the red indicators will light on in turns of two→three→four→two→three indicators..., which means the cameras into the automatic mode. After the above setting, push the button "AUTO/MANUAL" to "AUTO", then successfully set into the automatic mode.

2. O

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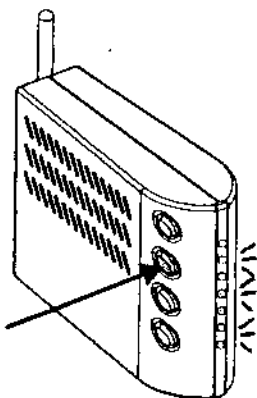
5) :

t

6) :

f

**C**



**C** Switching interval time :

2, 4, 6 seconds three modes for choice. Switch into the "AUTO" firstly., Push the button "EDIT", then the red indicators will light on in turns of two→three→four→two→three indicators..., which means 2 seconds (two indicators on), 4seconds (three indicators on), 6seconds (four indicators on) in turns.

The receiver will execute after 3 seconds.

# INSTALLATION

## EXAMPLES

M9320

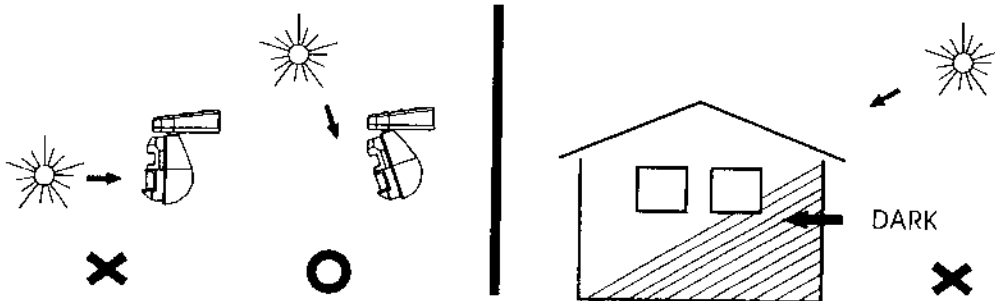
1. One transmitter and one receiver, with manual operation mode :
  - 1) Turn the power ON.
  - 2) Set up the manual operation mode. (Refer to Page 14)
  - 3) Switch the channel by the button "AUTO/MANUAL" to the required channel CH1-CH2-CH3-CH4 by turns. If the channel is correct, then you will see the clear image from TV (The channel setting of receiver should be correspondent to the transmitter).
  - 4) If the image is not clear, please adjust the antenna.
  
2. One receiver and more than one transmitters, with automatically channel switch :
  - 1) Turn the power ON.
  - 2) Set up the manual operation mode. (Refer to page 14)
  - 3) Adjust the antennas of each transmitter by th button "AUTO/MANUAL" to have the best image and voice.
  - 4) Push the button "EDIT" to set the total connected monitoring transmitters. (Refer to page 14).
  - 5) Set up the automatic operation mode (Refer to page 14) to switch each channels automatically.
  - 6) Set the interval time between each channels under the automatic mode. (Refer to page 14)

# BEFORE INSTALLATION

## INSTALLATION OF CAMERA

Please note the following instructions while you install the M9500 camera serial.

### POSITION

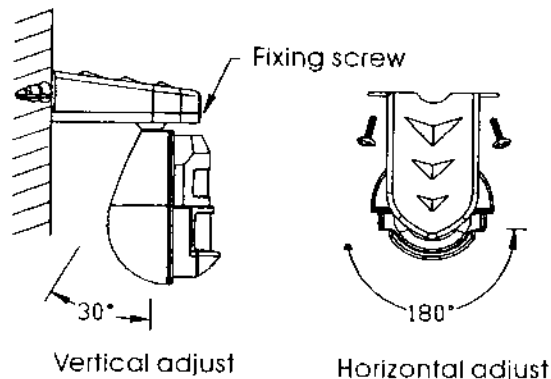


The camera can be positioned virtually anywhere indoors or outdoors. When mounting outdoors select a position where the camera will not be directly exposed to rain or other adverse weather conditions. The camera must be positioned so that it will not point directly into the sun or other bright light, as they may damage to the camera. Also avoid viewing areas where half the area is in bright sunlight and the other half is in the dark. The best viewing angle is achieved at greater heights with the camera pointing down. The camera should be mounted out of reach, to stop anybody tampering with it. A good fixing position is above a doorway.

### INSTALLATION

Your camera is adjustable both horizontally (180°) and vertically (30°) via a ball joint, which is secured with a wrench (supplied with the system), which can be locked into the position once your installation is complete. Do not over-tighten the screw as this may stop you from loosening it to make any slight adjustment in the future.

*Please note do not adjust the camera over the angle: vertical 30° and horizontal 180° as this will damage the camera.*



# FOR REFERENCE ONLY

## TROUBLE SHOOTING

If you experience any difficulty with the system, check the following points for possible misuse before calling service.

PROBLEM	POSSIBLE REASON	SOLUTION
Cannot receive the image or not clear image. (Set to the AV channel)	<ol style="list-style-type: none"> <li>1. Not switch on the transmitter or receiver.</li> <li>2. The connection between camera and transmitter not well.</li> <li>3. Channels set of transmitter doubled.</li> <li>4. The direction of flat antenna not correctly</li> <li>5. The connection between receiver and TV not well</li> <li>6. The locations of transmitter and receiver are close to the microwave oven, or heavy load machines.</li> <li>7. Transmitter with short distance interfere the one with long distance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure the power turn on.</li> <li>2. Check every connection.</li> <li>3. Check the settings of each transmitter, should be different.</li> <li>4. Adjust the antenna to the most proper position. The transmission will be better with higher location</li> <li>5. Check the wiring.</li> <li>6. Move to the proper position.</li> <li>7. Switch the bottom switcher "FAR or NEAR" of near one to "NEAR".</li> </ol>
the range of PIR not well (only for the camera with PIR, M9500A/B/C/D)	<ol style="list-style-type: none"> <li>1. The view angle of the camera is too high or too low.</li> <li>2. Located around hot atmosphere.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust the view of the camera.</li> <li>2. Adjust the location of camera.</li> </ol>
With picture, but no voice heard	<ol style="list-style-type: none"> <li>1. Audio output of receiver not connected well</li> <li>2. Volume of TV set to low or set the mute.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the connection.</li> <li>2. Adjust the settings of TV.</li> </ol>

## WARNING

1. TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK HAZARD, DO NOT EXPOSE THIS APPLANCE TO RAIN OR MOISTURE.
2. DO NOT INSERY ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.
3. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER OR BACK. NO USER SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONAL ONLY.



# FOR REFERENCE ONLY

## SPECIFICATION

### M9310 RF TRANSMITTER

RATED VOLTAGE : 110-240VAC

FREQUENCY : CH1/2411MHz · CH2/2434MHz  
CH3/2453MHz · CH4/2473MHz

DISTANCE : 30M/100FT(OPEN SPACE)

ANTENNA : FLAT ANTENNA

VEDIO SIGNAL : VEDIO INPUT 1Vp-p/75Ω

AUDIO SIGNAL : AUDIO INPUT MAX : 1.5Vp-p

POWER CONSUMPTION : DC 12V/300mA

OPERATION TEMPERATURE : 0°C~40°C

WEIGHT : 220g

DIMENSION : 95X43X120mm (WxHxD)

### M9320 RF RECEIVER

RATED VOLTAGE : 110-240VAC

FREQUENCY : CH1/2411MHz · CH2/2434MHz  
CH3/2453MHz · CH4/2473MHz

ANTENNA : Band Antenna

VEDIO SIGNAL : VEDIO OUTPUT 1Vp-p/75Ω

AUDIO SIGNAL : AUDIO OUTPUT MAX : 1.5Vp-p

POWER CONSUMPTION : DC12V/500mA

OPERATION TEMPERATURE : 0°C~40°C

WEIGHT : 300g

DIMENSION : : 45X113X152mm (WxHxD)

# FOR REFERENCE ONLY

## SPECIFICATION

M9500 HIGH SENSITIVITY CAMERA SEIRES

SIGNAL OUTPUT : 1Vp-p/75Ω COLOR & B/W

FREQUENCY : MAX 800mV(10KΩ)

MOTION DETECTOR : PIR(M9500A-M9500D)

RESOLUTION : COLOR CAMERA/350TV LINE

B/W CAMERA/320TV LINE

EFFICIENT PIXELS : NTSC 512 X 492

PAL 628 X 582

EIA 320 X 240

CCIR 352 X 288

WEIGHT : 210g

DIMENSION : 90 X 135 X 110mm (WxHxD)

### NOTE:

Specifications are subject to chang without notice.

Weighout and dimensions are approximate.

## FCC Compliance Statement

This equipment has been tested and found to comply with limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in residential installations. 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 interference to radio or television equipment 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
- Move the equipment away from the receiver
- Plug the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/television technician for additional suggestions

Only equipment certified to comply with Class B should be attached to this equipment to continuing compliance with FCC emission limit, and must have shielded interface cables.

You are cautioned that any change or modifications to the equipment not expressly approved by the party responsible for compliance could void your authority to operate such equipment.