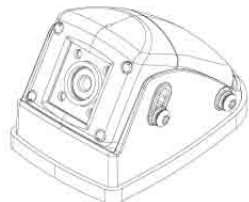


ECC-99R/L

Owner's Manual














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CAUTION BEFORE USAGE

-  1. PLEASE USE PRODUCTS AFTER READING MANUAL CAREFULLY FOR SAFE USAGE.
-  2. ASK EXPERIENCED TECHNICIAN FOR PRODUCTS INSTALLATION.
-  3. DO NOT OPEN OR MODIFY THE PRODUCTS. IT CAUSES PRODUCTS PROBLEM, AN ELECTRIC SHOCK & FIRE. ALSO, IT CAUSES WATERPROOF PROBLEM IN CASE OF WATERPROOF PRODUCTS. ASK YOUR DEALER FOR A/S IF YOU NEED REPAIRING.
-  4. DO NOT DROP OR GIVE EXTERNAL SHOCK TO THE PRODUCTS. IT CAUSES PRODUCT'S DISPLAY, FEATURE, MALFUNCTION OR COMPONENTS PROBLEM.
-  5. USE REGULATED VOLTAGE. MANUFACTURER DISCLAIM ALL THE RESPONSIBILITY FOR OVER VOLTAGE.
-  6. CONNECT MAIN POWER AFTER INSTALLATION.
-  7. USE SUPPLIED ACCESSORY & COMPONENTS. OTHERWISE, MANUFACTURER DISCLAIM ALL THE RESPONSIBILITY.
-  8. THE PRODUCTS IS DESIGNED FOR NORMAL CONDITION USAGE. PLEASE ASK OR DISCUSS WITH YOUR DEALER IF YOU USE THE PRODUCTS IN SPECIAL CONDITION. OTHERWISE, IT CAUSES PRODUCTS PROBLEMS IN ABNORMAL CONDITION USAGE.

SAFETY & CAUTION DURING THE USAGE

-  1. CHECK THE STATUS OF FIXED BRACKET BEFORE DRIVING. IT CAUSES PRODUCTS PROBLEM WHILE DRIVING. MANUFACTURER DISCLAIM ALL THE RESPONSIBILITY FOR USER'S FAULT.
-  2. DO NOT USE THE PRODUCTS IMMEDIATELY AFTER LEAVING IT ALONE FOR LONG PERIOD IN SUMMER OR WINTER.
-  3. DO NOT USE AND ASK YOUR DEALER IMMEDIATELY IN CASE OF BURNING SMELL OR OVER HEATING AT PRODUCTS.
-  4. DO NOT CUT THE CABLE, CUTTING CABLE CAUSES PRODUCTS MALFUNCTION OR WATERPROOF FUNCTION DEFECTS. OTHERWISE, MANUFACTURER DISCLAIM ALL THE RESPONSIBILITY.
-  5. MAKE SURE TO CONNECT POWER CABLE & CAMERA CABLE IN RIGHT DIRECTION. IT CAUSES A DAMAGE TO THE PRODUCTS IN CASE OF THE WRONG WIRE CONNECTION.
-  6. TIGHTEN CONNECTORS IN CASE OF CONNECTING EXTENSION CABLE. OTHERWISE, IT CAUSES CONNECTION PROBLEM OR WATERPROOF FUNCTION DEFECT ON PRODUCTS.
-  7. DO NOT WRAP THE PRODUCTS WHILE OPERATING. IT CAUSES PRODUCTS PROBLEM OR FIRE
-  8. AVOID THE PRODUCTS IN ELECTROSTATIC CONDITION. IT CAUSES WRONG OPERATION.
-  9. DO NOT PILE UP HEAVY STUFF ON PRODUCTS. IT CAUSES PRODUCTS PROBLEM OR DAMAGE.
-  10. ASK YOUR DEALER AFTER DISCONNECTING POWER CABLE IN CASE OF FINDING ANY DEBRIS INSIDE OF PRODUCTS. IT CAUSES PRODUCTS PROBLEM OR AN ELECTRIC SHOCK.
-  11. DO NOT USE STRONG SOLVENTS SUCH AS THINNER OR BENZINE AS THEY MIGHT DAMAGE THE FINISH OF PRODUCTS OR PRODUCTS PROBLEM.

1 COMPOSITION



CAMERA



RUBBER BRACKET



CAMERA BRACKET



L-Wrench (1)



T/H M5X16L
STAINLESS
BK (3)



P/H W/WASHER
T5X16L
STAINLESS,BK (3)



M4X10L W/SPRING
FLATE
WASHER,BK (4)



HEX M5X5
STAINLESS (3)



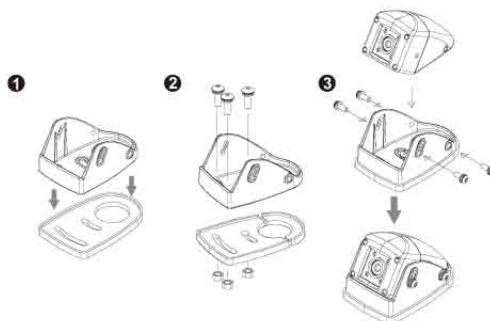
20M CABLE (1)
(OPTIONAL)



INSTRUCTION
MANUAL

2 INSTALLATION

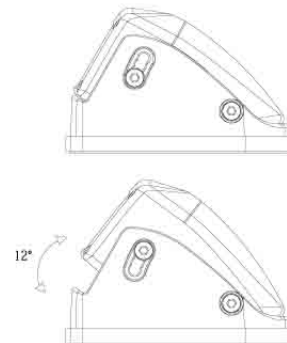
INSTALL CAMERA FIRMLY AT THE ADEQUATE POSITION OF VEHICLE AFTER CHECKING CAMERA'S FIELD OF VIEW. CAMERAS CAN BE INSTALLED AT SUITABLE POSITION OF VEHICLE'S REAR SIDE ACCORDING TO USER'S CONVENIENCE. ASK YOUR DEALER OR EXPERIENCED TECHNICIAN HOW TO INSTALL CAMERA & MONITOR DUE TO DIFFERENT TYPE OF VEHICLE.



- 2-1. FIX THE SUPPLIED MOUNTING BRACKET TO THE VEHICLE.
- 2-2. ADJUST ANGLE OF THE CAMERA.

* FASTEN THE SCREW FIRMLY TO AVOID PRODUCT'S DAMAGE OR OPERATION.

HOW TO ADJUST CAMERA ANGLE



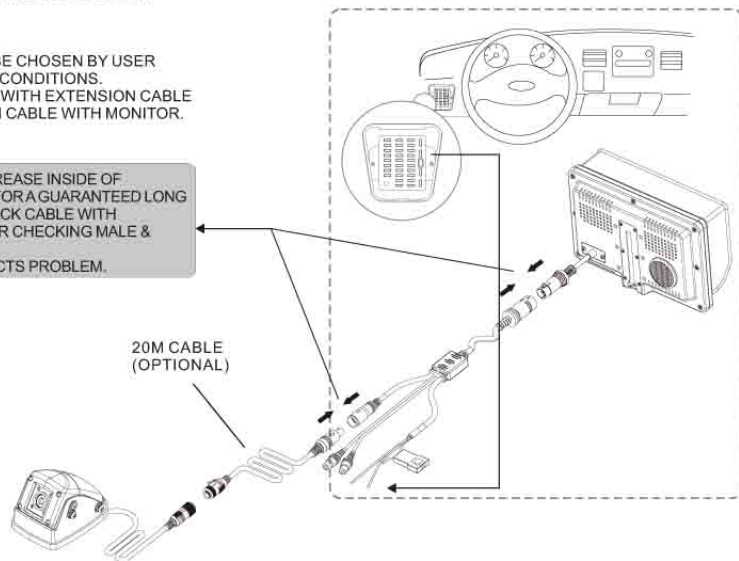
- A. RECOMMENDED GUIDE LINE FOR ASSEMBLING BRACKET
- B. USER CAN ADJUST THE INSTALLING ANGLE

3 CONNECTION WIRING

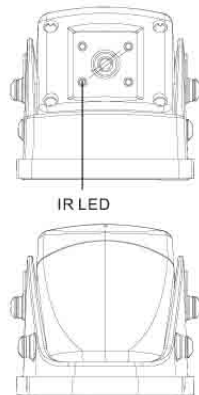
CONNECT CAMERA & MONITOR AFTER CHECKING SPECIFICATION OF MONITOR & EXTENSION CABLE. CONNECT POWER & GROUND WIRE OF MONITOR TO FUSE BOX OF VEHICLE WHEN YOU CONNECT MONITOR POWER.

* POWER CONNECTION SHOULD BE CHOSEN BY USER ACCORDING TO POWER SUPPLY CONDITIONS. CONNECT CAMERA BACK CABLE WITH EXTENSION CABLE AND THEN CONNECT EXTENSION CABLE WITH MONITOR.

* USE ACID FREE VASELINE OR GREASE INSIDE OF CONNECTOR BEFORE FIXATION FOR A GUARANTEED LONG LIFETIME. CONNECT CAMERA BACK CABLE WITH EXTENSION CABLE FIRMLY AFTER CHECKING MALE & FEMALE CONNECTOR. OTHERWISE, IT CAUSES PRODUCTS PROBLEM.



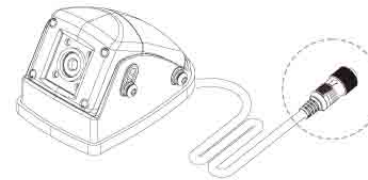
6 FEATURES



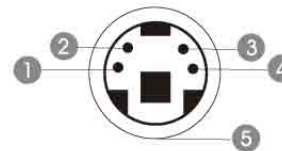
IR LED

Aerodynamic Multi-Purpose camera
 1/4" CCD high quality image sensor
 Adjustable PAN/TILT installation
 Extra-wide filed of view
 Built-in microphone
 Enhanced IR LED
 Vandal resistant
 Waterproof housing
 Input voltage: DC 12V from monitor

4 CAMERA INPUT CONNECTOR PIN DESCRIPTION



4P IP CONNECTER



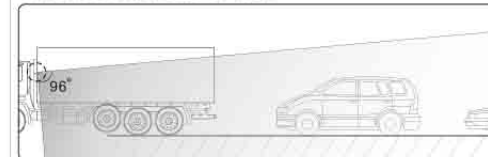
Pin No.	Description
1	Video Output
2	NC
3	Audio Output
4	Power DC 12V
5	Ground

5 LENS SPECIFICATION

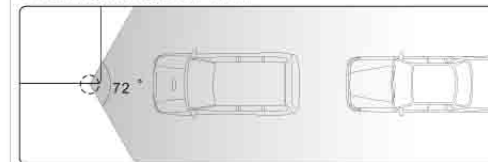


DIAGONAL ANGLE : 120 DEGREE
 HORIZONTAL ANGLE : 96 DEGREE
 VERTICAL ANGLE : 72 DEGREE

● HORIZONTAL FIELD OF VIEW

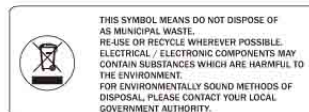


● VERTICAL FIELD OF VIEW



7 SPECIFICATIONS

Model No.	ECC-99R/L
Image	Interline transfer type CCD
Picture Element	NTSC: 270,000 pixels PAL: 320,000 pixels
Image Size	1/4 Inch
Lens	Diagonal Angle : 120 degree Horizontal Angle : 96 degree Vertical Angle : 72 degree
Synchronization	Internal
Horizontal Resolution	NTSC: More than 330TV lines PAL: More than 380TV lines
Min. Illumination	0 Lux W/ IR LED
Signal To Noise Ratio	Better than 50dB(at AGC off)
Power Supply	DC 12V
Power Consumption	Max. 3.0W
Vibration	7G
Impact	100G
IP Factor	IP 69K
Operation Temp.	-30℃~80℃ (-22°F~176°F)
Case Material	Window: Curved Glass Body: Aluminum
Weight	Approx. 320g
Dimensions	89(W) X 58(H) X 56(D)mm
Supplied Accesories	Camera Bracket Rubber Bracket Screw Kits 20M Cable (Optional) Instruction Manual



* Design and specifications are subject to change without notice.
 * Patent registered.