

MTB-7400Q

7" Wide TFT LCD Color Quad System



WARNING
RISK OF ELECTRIC SHOCK
DO NOT OPEN



To reduce the risk of electric shock do not remove cover(or back)
No user serviceable parts inside. Refer servicing to qualified service personnel.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Design and specification are subject to change without notice.



USER GUIDE

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I Features / Technical Specifications

MONITOR	SPECIFICATION	RESOLUTION	1440 (W) x 234(H) Pixels
		BRIGHTNESS	500 cd / m ²
		SCREEN MODE	WIDE SCREEN(16:9)
		VIEW ANGLE	TOP: 40° BOTTOM: 60°LEFT: 60°RIGHT:60°
		CAR REAR VIEW	AUTOMATIC SCREEN-ON (SIGNAL FROM "R"GEAR)
		HOUSING	RUBBER TOUCH NEUTRAL BLACK
		DISPLAY MODE	NOR./ MIR.& UP / DOWN IMAGE REVERSING
		4 CAMERAS INPUT	SHUTTER CAMERA / REAR VIEW CAMERA SIDE VIEW CAMERA / HEATER CAMERA
		POWER SOURCE	DC 10V ~ 30V (Free voltage)
		OPERATING TEMP.	-20°C ~ 70°C / - 4°F ~ +158°F
		STORAGING TEMP.	-30°C ~ 85°C / -22°F ~ +185°F
		AUDIO OUTPUT	BUILT- IN SPEAKER (1W)
		REMOTE CONTROL	BUILT- IN REMOTE RECEIVER
		DIMMER	BUILT- IN CDS SENSOR Automatic/Manual
SIZE	DIMENSION	181 (W) x 122 (H) x 24(D)mm (7.13x4.8x0.94 Inch)	
	WEIGHT	450 (g)	
CAMERA	WATERPROOF / SUN SHIELD / IR SENSOR / NORMAL/MIRROR / HEATER (OPTIONAL)		
ACCESSORIES	POWER & CAMERA INPUT CABLE / STAND BRACKET KIT / SUCTION CUP KIT (OPTIONAL) SUN SHIELD WITH PROTECTION RUBBER (PATENT PENDING)		

II Checking the main unit and supplied accessories

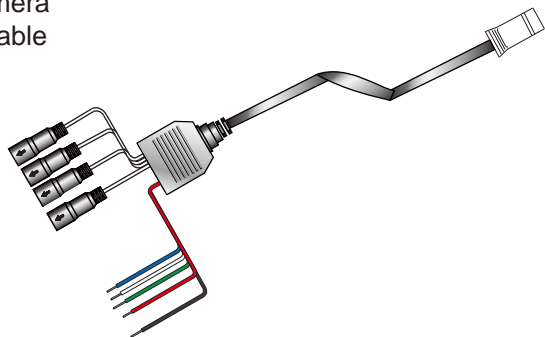
◆ MTB-7400Q (QUAD MONITOR)



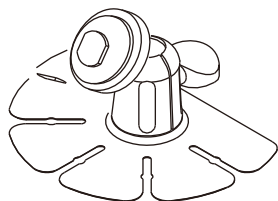
- ① Power
- ② MENU
- ③ DIM
- ④ SPLIT (up)
- ⑤ CA.SEL (down)
- ⑥ VOLUME down
- ⑦ VOLUME up
- ⑧ Cds Sensor

Supplied Accessories

- Power & Camera Input Cable

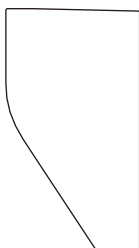


- Stand Bracket Kit

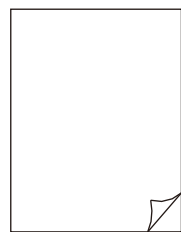


- Heavy Duty Bracket Kit

- Rubber Sun Shield



- User's Guide



A Menu Control Keys

1 Power Key

- When POWER OFF (which means STANDBY state), the LED lights in RED color.
- When POWER OFF, the R gear and the WINKERS (Left / Right) and the TACHOMETER make that the linked each camera operates for displaying its field of view on the monitor.
- After POWER ON, the LED in RED color is turned off and all LEDs light in GREEN color.
- After POWER ON, the LAST CHANNEL saved from its last operation is displayed on the monitor. set-up (Factory Default).

- DIRECT POWER ON Subject To LAST POWER SAVE Mode:

* After starting up the car engine, the monitor turns on automatically at the same time and the monitor starts displaying of the views from the cameras if the LAST POWER SAVE mode is ON.

- (1) If the car engine had been turned off at the POWER ON state of monitor, the LAST POWER SAVE mode is ON (Factory Recommendation).
- (2) If the car engine had been turned off after the POWER OFF of monitor, the LAST POWER SAVE mode is OFF.

2 Menu Key

- If the Menu Key is pressed at the POWER ON mode, the OSD appears in the monitor and the selected letters on OSD is classified in a different color.
- If pressing of the Menu Key is repeated in OSD state, the display is circled in regular sequence of FUNCTION → PICTURE → NOR / MIR → Clear of OSD. the sequence will be as below without the CAMERA OSD. FUNCTION → PICTURE → Clear of OSD.

FUNCTION		PICTURE		NOR / MIR	
LANGUAGE	ENGLISH	CONTRAST	50 (0-100)	CA1	NOR/MIR
SYSTEM	NTSC/PAL	BRIGHT	50 (0-100)	CA2	NOR/MIR
DIRECTION	0 /180	COLOR	50 (0-100)	CA3	NOR/MIR
DIMMER	AUTO/OFF	TINT	50 (0-100)	CA4	NOR/MIR
RESET	ENTER				

3 DIMMER Key

- The brightness is adjusted manually at the POWER ON mode, if DIMMER is selected in OSD set-up.
Pressing of DIMMER Key in this condition makes the change of brightness responding on every manual operation of the Key.

4 SPLIT(Up) Key

- If pressing of the QUAD Key is repeated at the POWER ON mode, the display is revolved in sequence of SPLIT → PIP → TRIPLE → QUAD.
- In OSD state, this QUAD Key is in use of moving a cursor to downward as well.

5 CA.SEL(down) Key

- If pressing of the CA.SEL Key is repeated at the POWER ON mode, the CHANNEL is changed in regular sequence of CH1 → CH2 → CH3 → CH4

6.7 VOLUME Up / Down Key

- In OSD state, pressing of these VOLUME Up / Down KEYS makes the selected function to be adjusted and changed its status to new setup.
- Pressing of these VOLUME Up / Down KEYS at POWER ON mode makes that the audio volume of the monitor is increased and/or decreased.

VOLUME Down KEY: To decrease the VOLUME
VOLUME Up KEY: To increase the VOLUME
Adjustable volume range from 0 to 100 (0 ~ 100)
Factory Default: 50



- SYSTEM
 - Locate the cursor at SYSTEM by SPLIT and/or CA.SEL Keys.
 - Select the proper system in your region by VOLUME Up/Down Keys.
 - Factory default is PAL.

- DIRECTION
 - Locate the cursor at DIRECTION by SPLIT and/or CA.SEL Keys.
 - Select the desired direction by VOLUME Up/Down Keys.
 - 0 : Normal Screen (Factory Default)
 - 180 : Shifted Screen to 180° reversely.

- DIMMER SELECT KEY
 - Locate the cursor at SELECT KEY by SPLIT and/or CA.SEL Keys.
 - Select DIM by VOLUME Up/Down Keys.

- DIM : Release AUTO DIMMER and adjust the brightness manually by pressing of DIMMER Key.

B How to set up the functions of the Menu on OSD

1 FUNCTION

- Language : 6 Languages
ENGLISH, GERMAN, FRENCH, ITALIAN, SPANISH, DUTCH
- Locate the cursor at LANGUAGE by CHANNEL and/or QUAD keys.
- Select the desired language by VOLUME Up/Down Keys.
- Factory default is ENGLISH.

FUNCTION	
LANGUAGE	ENGLISH
SYSTEM	NTSC/PAL
DIRECTION	0 /180
DIMMER	AUTO/OFF
RESET	ENTER

2 PICTURE

PICTURE	
CONTRAST	50 (0-100)
BRIGHT	50 (0-100)
COLOR	50 (0-100)
TINT	50 (0-100)

- **CONTRAST**
 - Display PICTURE set-up Screen by pressing the MENU Key twice and locate the cursor at CONTRAST by SPLIT and/or CA,SEL Keys.
 - Adjust the Contrast by the Volume Up/Down Keys.
0 ~ 100 / 50 : Factory Default
- **BRIGHTNESS**
 - After locating the cursor at BRIGHT by SPLIT and/or CA.SEL Keys, adjust the Brightness by the Volume Up/Down Keys.
0 ~ 100 / 50 : Factory Default
- **COLOR**
 - After locating the cursor at COLOR by SPLIT and/or CA.SEL Keys, adjust the Color by the Volume Up/Down Keys.
0 ~ 100 / 50 : Factory Default
- **TINT**
 - After locating the cursor at TINT by SPLIT and/or CA.SEL Keys, adjust the Tint by the Volume Up/Down Keys.
0 ~100 / 50 : Factory Default

3 NOR / MIR

NOR / MIR	
CA1	NOR/MIR
CA2	NOR/MIR
CA3	NOR/MIR
CA4	NOR/MIR

- **CAMERA1**
 - Display NOR/MIR set-up Screen by pressing the MENU Key 9 times and locate the cursor at CA1 by SPLIT and/or CA.SEL Keys.
 - Select the desired viewing mode between NOR and MIR by Volume Up/Down Keys.
 - NOR : Normal Image / Factory Default
 - MIR : Mirror Image
(Symmetrically Reversed Image of Left & Right against Normal Image)
- **CAMERA2**
 - After locating the cursor at CA2 by SPLIT and/or CA.SEL Keys, select the desired viewing mode between NOR and MIR by Volume Up/Down Keys.
 - NOR : Normal Image / Factory Default
 - MIR : Mirror Image
(Symmetrically Reversed Image of Left & Right against Normal Image)
- **CAMERA3**
 - After locating the cursor at CA3 by SPLIT and/or CA.SEL Keys, select the desired viewing mode between NOR and MIR by Volume Up/Down Keys.
 - NOR : Normal Image / Factory Default
 - MIR : Mirror Image
(Symmetrically Reversed Image of Left & Right against Normal Image)
- **CAMERA4**
 - After locating the cursor at CA4 by SPLIT and/or CA.SEL Keys, select the desired viewing mode between NOR and MIR by Volume Up/Down Keys.
 - NOR : Normal Image / Factory Default
 - MIR : Mirror Image
(Symmetrically Reversed Image of Left & Right against Normal Image)

TRIGGER			
TRI1	CA1	(CA1~QUAD)	
TRI2	CA2	(CA1~QUAD)	
TRI3	CA3	(CA1~QUAD)	
TRI1	TIME	(0~9)	3
TRI2	TIME	(0~9)	3
TRI3	TIME	(0~9)	3

- TRI 1
 - Display TRIGGER set-up Screen by pressing the MENU Key 9 times and locate the cursor at TRI 1 by SPLIT and/or CA.SEL Keys.
 - Select the desired view mode among full screen of CA1~4 and SPLIT, PIP, TRIPLE & QUAD view mode by Volume Up/Down Keys.
 - Factory Default : Full Screen of CA1

- TRI 2
 - After locating the cursor at TRI 2 by SPLIT and/or CA.SEL Keys, select the desired view mode among full screen of CA1~4 and SPLIT, PIP, TRIPLE & QUAD view mode by Volume Up/Down Keys.
 - Factory Default : Full Screen of CA2

- TRI 3
 - After locating the cursor at TRI 3 by SPLIT and/or CA.SEL Keys, select the desired view mode among full screen of CA1~4 and SPLIT, PIP, TRIPLE & QUAD view mode by Volume Up/Down Keys.
 - Factory Default : Full Screen of CA3

- TRI 1 TIME
 - After locating the cursor at TRI 1 TIME by SPLIT and/or CA.SEL Keys, select the desired delaying time for the selected viewing mode among 0 ~ 9 seconds by Volume Up/Down Keys.
 - Factory Default : 0 second

- TRI 2 TIME
 - After locating the cursor at TRI 2 TIME by SPLIT and/or CA.SEL Keys, select the desired delaying time for the selected viewing mode among 0 ~ 9 seconds by Volume Up/Down Keys.
 - Factory Default : 3 seconds

- TRI 3 TIME
 - After locating the cursor at TRI 3 TIME by SPLIT and/or CA.SEL Keys, select the desired delaying time for the selected viewing mode among 0 ~ 9 seconds by Volume Up/Down Keys.
 - Factory Default : 3 seconds

5 TACHO GRAPH

TACHO GRAPH	
TACHO SW	ON/OFF
TACHO	CA1 (CA1~QUAD)
TACHO TIME	0 ~ 9
FREQUENCY	67 HZ (10 ~ 101HZ)

- TACHO...SW
 - Display TACHO set-up Screen by pressing the MENU Key 9 times and locate the cursor at TACHO by SPLIT and/or CA.SEL Keys.
- TACHO CA1
 - After locating the cursor at TACHO by SPLIT and/or CA.SEL Keys, select the desired Tacho to view among the cameras 'CA1 ~ QUAD' by Volume Up/Down Keys.
- TACHO TIME
 - After locating the cursor at TACHO TIME by SPLIT and/or CA.SEL Keys, select the desired Tacho Time to view among the cameras '0 ~ 9' by Volume Up/Down Keys.
- FREQUENCY
 - After locating the cursor at FREQUENCY by SPLIT and/or CA.SEL Keys, select the desired Frequency to among the cameras '10HZ ~ 101HZ' by Volume Up/Down Keys.
 - Factory Default : 67HZ

6 SPLIT1 / SPLIT2

SPLIT1	
SOURCE 1	CA1 (CA1~CA4)
SOURCE 2	CA2 (CA1~CA4)
AUDIO	CA1 (CA1~CA4)

SPLIT2	
SOURCE 1	CA1 (CA1~CA4)
SOURCE 2	CA2 (CA1~CA4)
AUDIO	CA1 (CA1~CA4)

- SPLIT
 - Display SPLIT set-up Screen by pressing the MENU Key 9 times and locate the cursor at SPLIT by SPLIT and/or CA.SEL Keys.
- SOURCE1
 - After locating the cursor at SOURCE1 by SPLIT and/or CA.SEL Keys, select the desired Camera to view among the cameras 'CA1 ~ CA4' by Volume Up/Down Keys.
- SOURCE2
 - After locating the cursor at SOURCE2 by SPLIT and/or CA.SEL Keys, select the desired Camera to view among the cameras 'CA1 ~ CA4' by Volume Up/Down Keys.
- AUDIO
 - After locating the cursor at AUDIO by SPLIT and/or CA.SEL Keys, select the desired Camera to hear of the AUDIO among the cameras 'CA1 ~ CA4' by Volume Up/Down Keys.
 - Factory Default : CA1

7 PIP

PIP	
SOURCE 1	CA1 (CA1~CA4)
SOURCE 2	CA2 (CA1~CA4)
SOURCE 3	CA3 (CA1~CA4)
AUDIO	CA1 (CA1~CA4)

- PIP
 - Display PIP set-up Screen by pressing the MENU Key 9 times and locate the cursor at PIP by SPLIT and/or CA.SEL Keys.

- SOURCE1
 - After locating the cursor at SOURCE1 by SPLIT and/or CA.SEL Keys, select the desired Camera to view among the cameras 'CA1 ~ CA4' by Volume Up/Down Keys.

- SOURCE2
 - After locating the cursor at SOURCE2 by SPLIT and/or CA.SEL Keys, select the desired Camera to view among the cameras 'CA1 ~ CA4' by Volume Up/Down Keys.

- SOURCE3
 - After locating the cursor at SOURCE3 by SPLIT and/or CA.SEL Keys, select the desired Camera to view among the cameras 'CA1 ~ CA4' by Volume Up/Down Keys.

- AUDIO
 - After locating the cursor at AUDIO by SPLIT and/or CA.SEL Keys, select the desired Camera to hear of the AUDIO among the cameras 'CA1 ~ CA4' by Volume Up/Down Keys.
 - Factory Default : CA1

8 TRIPLE

TRIPLE	
SOURCE 1	CA1 (CA1~CA4)
SOURCE 2	CA2 (CA1~CA4)
SOURCE 3	CA3 (CA1~CA4)
AUDIO	CA1 (CA1~CA4)

- TRIPLE
 - Display TRIPLE set-up Screen by pressing the MENU Key 9 times and locate the cursor at TRIPLE by SPLIT and/or CA.SEL Keys.

- SOURCE1
 - After locating the cursor at SOURCE1 by SPLIT and/or CA.SEL Keys, select the desired Camera to view among the cameras 'CA1 ~ CA4' by Volume Up/Down Keys.

- SOURCE2
 - After locating the cursor at SOURCE2 by SPLIT and/or CA.SEL Keys, select the desired Camera to view among the cameras 'CA1 ~ CA4' by Volume Up/Down Keys.

- SOURCE3
 - After locating the cursor at SOURCE3 by SPLIT and/or CA.SEL Keys, select the desired Camera to view among the cameras 'CA1 ~ CA4' by Volume Up/Down Keys.

- AUDIO
 - After locating the cursor at AUDIO by CHANNEL and/or QUAD Keys, select the desired Camera to hear of the AUDIO among the cameras 'CA1 ~ CA4' by Volume Up/Down Keys.
 - Factory Default : CA1

9 QUAD

QUAD	
SOURCE 1	CA1 (CA1~CA4)
SOURCE 2	CA2 (CA1~CA4)
SOURCE 3	CA3 (CA1~CA4)
SOURCE 4	CA4 (CA1~CA4)
AUDIO	CA1 (CA1~CA4)

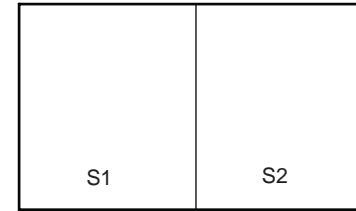
- **QUAD**
- Display QUAD set-up Screen by pressing the MENU Key 9 times and locate the cursor at QUAD by SPLIT and/or CA.SEL Keys.
- **SOURCE1**
- After locating the cursor at SOURCE1 by SPLIT and/or CA.SEL Keys, select the desired Camera to view among the Cameras 'CA1 ~ CA4' by Volume Up/Down Keys.
- **SOURCE2**
- After locating the cursor at SOURCE2 by SPLIT and/or CA.SEL Keys, select the desired Camera to view among the Cameras 'CA1 ~ CA4' by Volume Up/Down Keys.
- **SOURCE3**
- After locating the cursor at SOURCE3 by SPLIT and/or CA.SEL Keys, select the desired Camera to view among the cameras 'CA1 ~ CA4' by Volume Up/Down Keys.
- **SOURCE4**
- After locating the cursor at SOURCE4 by SPLIT and/or CA.SEL Keys, select the desired Camera to view among the cameras 'CA1 ~ CA4' by Volume Up/Down Keys.
- **AUDIO**
- After locating the cursor at AUDIO by SPLIT and/or CA.SEL Keys, select the desired Camera to hear of the AUDIO among the cameras 'CA1 ~ CA4' by Volume Up/Down Keys.
- Factory Default : CA1

10 CAM / MODUS

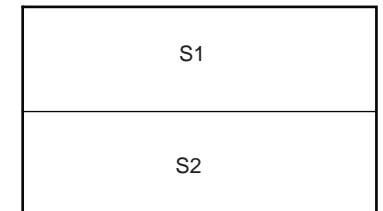
CAM / MODUS	
CA 1	ON / OFF
CA 2	ON / OFF
CA 3	ON / OFF
CA 4	ON / OFF
SPLIT1	ON / OFF
SPLIT2	ON / OFF
PIP	ON / OFF
TRIPLE	ON / OFF
QUAD	ON / OFF

- **CAM / MODUS**
- Display CAM / MODUS set-up Screen by pressing the MENU Key 9 times and locate the cursor at CAM / MODUS by SPLIT and/or CA.SEL Keys.
- After locating the cursor at CA1~QUAD by SPLIT and/or CA.SEL Keys, select the desired CAM/MODUS to view among the cameras 'CA1 ~ QUAD' by Volume Up/Down Keys.

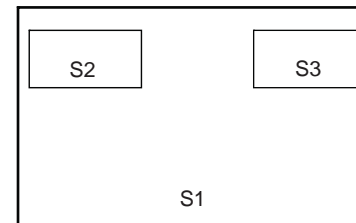
● APPLICATION DISPLAY



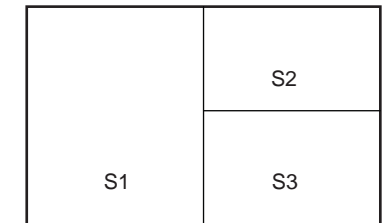
SPLIT 1



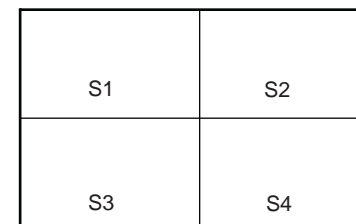
SPLIT 2



PIP



TRIPLE



QUAD

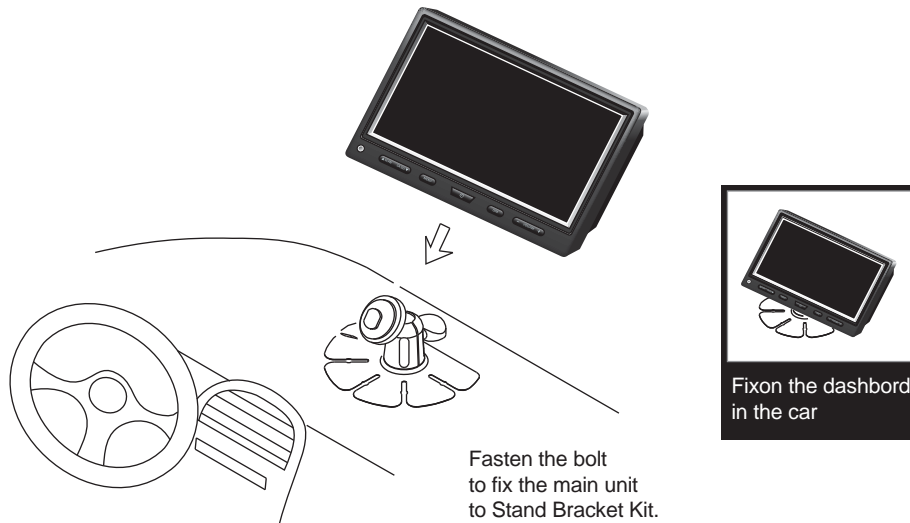


FULL SCREEN

IV Using MTB-7400Q in the car

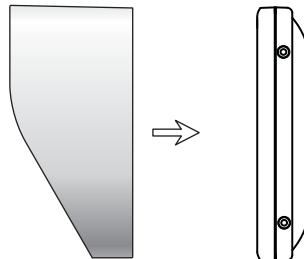
◆ For using MTB-7400Q on the dashboard

- After connecting power to the unit through the Cigarette adaptor, press [Power button] on the main unit or on the Remote Control to power on.
- Set up MTB-7400Q with Stand Bracket Kit and fix the Stand Bracket Kit on the dashboard of the car.

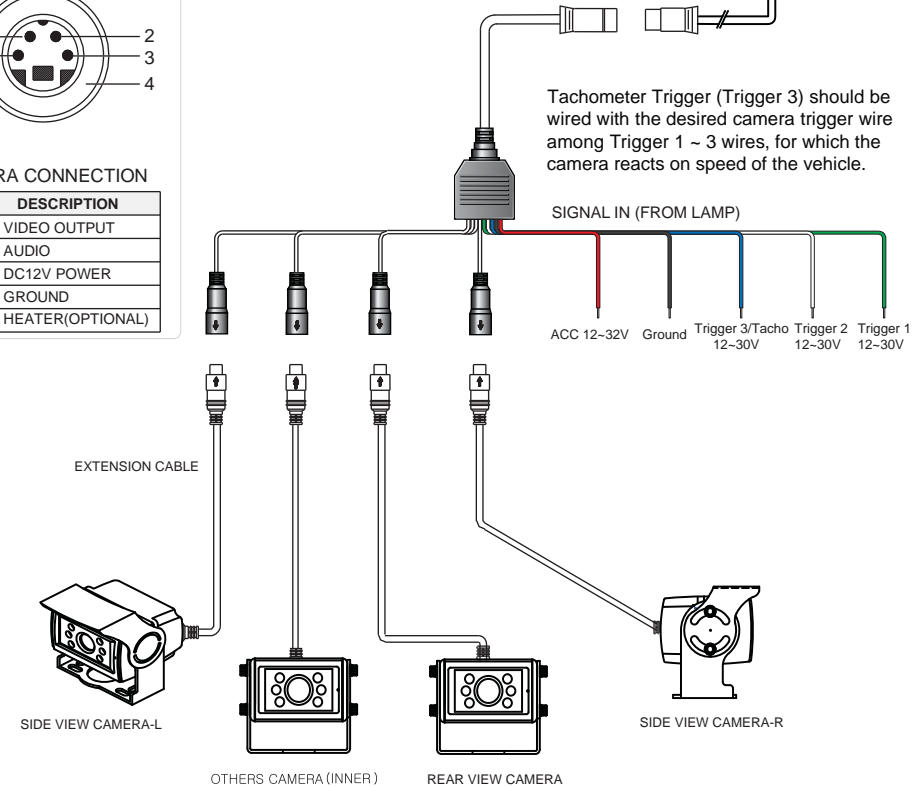
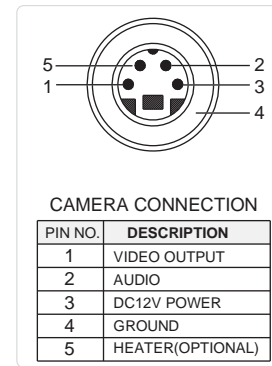
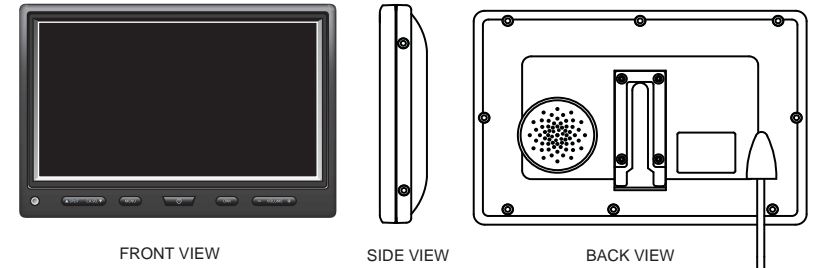


V Sun Shield

By setting up MTB-7400Q with the Sun Shield which has the rubber guide for protection, the MTB-7400Q will be shielded off the direct sunlight. The Sun Shield will offer visual comfort for driving and will make driving safer & more comfortable. Also, the rubber Sun Shield Will give the drivers a great help to protect them from injury.

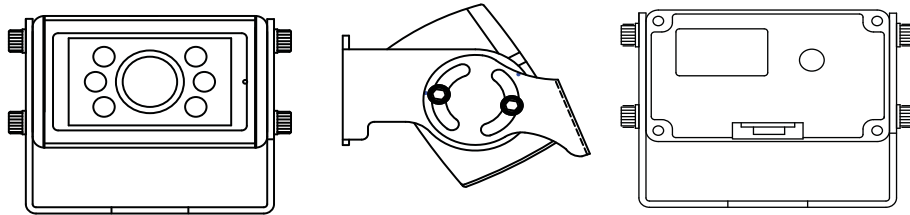


VI System Wiring



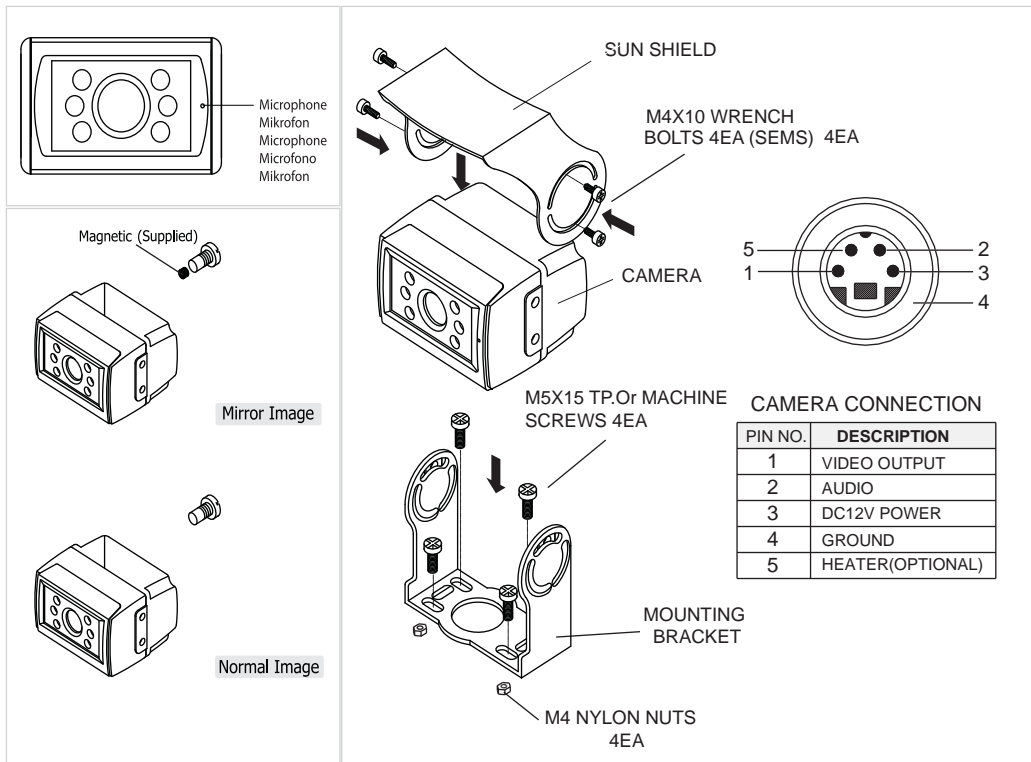
VII MTB-10C Rear View Camera

- Waterproof Aluminium Diecasted Low Illumination Color CCD Camera.
- Mirror & Normal Image Views



1 Features & Installation

Attach the supplied mounting bracket to vehicle.
Adjust the angle of the camera and fasten the screws firmly.



2 Specifications

IMAGE SENSOR	1/3" Sony Super HAD Color CCD (Compatible with Sharp CCD)
EFFECTIVE PIXELS	NTSC : 270,000 Pixels / PAL : 320,000 Pixels
RESOLUTION	380 TV Lines
SYNCHRONIZING SYSTEM	Internal
VIDEO OUTPUT	75 Ohms ,1.0Vp-p Composite.
AUDIO INPUT	High Sensitive C-Microphone
S/N RATIO	More than 48dB
REQUIRED ILLUMINATION	0 Lux at F2.0 / f =2.45mm (LED ON)
POWER SOURCE	DC 12V / Max. 150mA (LED ON)
OPERATING VOLTAGE RANGE	DC 12V
FIELD OF VIEW / OPTION	120° 130° 150°
OPERATING TEMPERATURE	-22°F ~ 140°F (-30°C ~ +60°C) -58°F ~ 140°F (-50°C ~ +60°C) With Heater
DIMENSION	69(W) X 42(H) X57(D) mm 2.7(W) X 1.65(H) X 2.2(D) inch
WEIGHT	650g
ACCESSORIES	65ft (20M) Waterproof cable (Option) Sun Shield Mounting Bracket and Screw Kits
BEST NIGHT VIEW FEATURE	20 degrees visible IR LED X 6ea