KRAMP

UK	7-inch camera system
DE	7-Zoll-Kamerasystem
FR	Système de caméras 7"
NL	7-inch cameraset
ES	Sistema de cámaras de 7 pulgadas
IT	Sistema di ripresa video da 7"
PT	Sistema de câmaras de 7"
CZ	7" kamerový systém
SK	7-palcový kamerový systém
PL	7-calowy system monitoringu
HU	7"-es kamerarendszer
RU	Система с камерой с 7-дюймовым монитором

Features

Monitor
The 7" colour TFT LCD monitor is designed for automotive vehicle rear view applications.
- Video signal (V1/V2) can be selected by pressing CAM SEL / ⏻ button on the monitor.
- Mirror / Normal image can be set by simply pressing the MIR button on the monitor.
- With built in speaker.
- With remote controller.
- Foreign languages menu optional (English, French, German, Dutch).
- With high-low voltage and short-circuit protection.

Camera
The colour camera is designed for heavy-duty applications.
- You can use the camera by a DC 12V/200mA.
- The camera is automatically powered when the system is turned on.
- The camera utilises a CCD image sensor with a high quality picture.
- The camera automatically adjusts the picture according to light conditions.
- Water resistant housing.
- Operates over a wide temperature range.

Monitor controls

CAM SEL/⏻   −   +   NOR/MIR   MENU
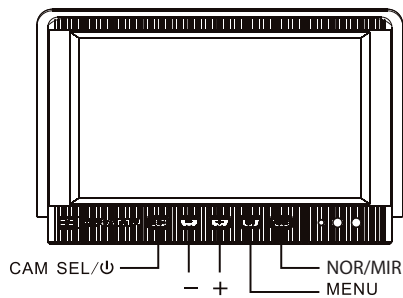
1. CAM SEL / ⏻

⏻   : power ON/OFF the system
CAM SEL   : this button is used to select between camera 1 and camera 2.

2. MENU
Menu is activated and selected in the order.
Colour: Adjust the colour for the monitor
Bightness: Adjust the brightness for the monitor
Contrast: Adjust the contrast for the monitor
Volume: Adjust the volume for the monitor
Language: Select the language: English, French, German, Dutch
Return: Press this button to exit the OSD menu

Important
a. Press "-" or "+" to select the item, then press "MENU" button to confirm, the item is selected, then press "-" or "+" to adjust the specification on this item.
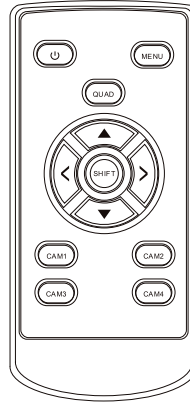b. Please do not mix PAL and NTSC cameras.

3. MIR
You can select Mirror/Normal image by simply pressing the MIR button on the monitor.

Remote control

⏻	Power on / off the system
MENU	Menu function & confirm function
QUAD	Reserved
▲	Move upwards
▼	Move downwards
>	Selection key ¨plus¨
<	Selection key ¨minus¨
SHIFT	Reserved
CAM 1	Selection camera 1
CAM 2	Selection camera 2

## Remarks
Distance for remote controller: within 5 metres.
Angle for remote controller ±30°.

Monitor installation
• Install the monitor on a surface which will support more than 4kg (9Lbs) of weight.
• Install the monitor away from a speaker mounted in the vehicle, so the picture is not distorted by the speaker's magnetic field.
• Do not instal the unit in an extremely hot or humid place (radiator, air-duct, etc.) or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
• The monitor is not waterproof.

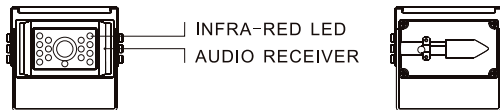1. Attach the supplied mounting bracket to the celling or the floor, etc.
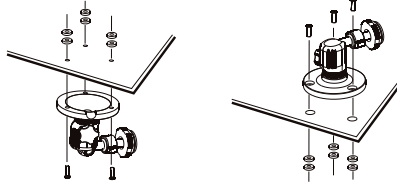
2. Adjust the angle of the monitor and fasten the screws firmly.

Camera controls

INFRA-RED LED
AUDIO RECEIVER
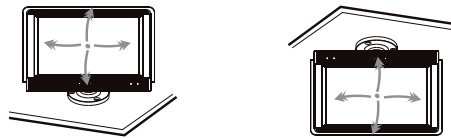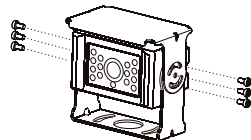
Camera installation
Attach the supplied mounting bracket to the vehicle. Adjust the angle of the camera and fasten the screws firmly.
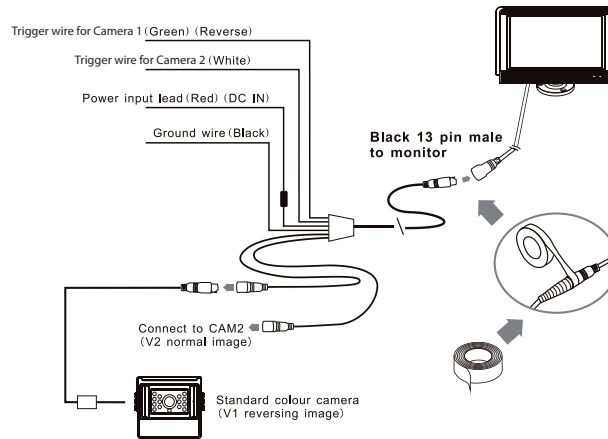

Mount the camera with the sun-shield on the mounting bracket when installing.

Connection

- Connect the RED wire to the positive (12V or 24V DC) power terminal which corresponds with the ingnition key in the accessory position.
- Connect the BLACK wire to a suitable negative connection point on the vehicle.
- Connect the GREEN (video 1 trigger) wire to the switched power output terminal of the "R" (reverse) gear. Trigger is always priority.

Trigger wire for Camera 1 (Green) (Reverse)
Trigger wire for Camera 2 (White)
Power input lead (Red) (DC IN)
Ground wire (Black)
Black 13 pin male to monitor
Connect to CAM2 (V2 normal image)
Standard colour camera (V1 reversing image)

CAUTION

- Before making the connection, disconnect the ground terminal of the vehicle battery.
- Make sure that all the connectors are connected firmly!
- If your vehicle has been parked in direct sunlight resulting in a considerable rise in temperature inside the vehicle, allow the unit to cool off before operating.

Cleaning and general maintenance

- Power off before cleaning.
- Do not use liquid or aerosol cleaners.
- Clean the unit with a slightly damp soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzine as they might damage the finsh of the unit.

Ventilation

Holes in the the back or bottom of the monitor are provided for ventilation, and ensure reliable operation of the monitor equipment. These holes must not be blocked or covered.

Object and liquid entry

Never push objects of any kind into this monitor through holes as they may touch dangerous voltage points or short-out parts, that could result in a fire or electric shock. Never spill liquid of any kind on product.

Service

Do not attempt to service this system yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Specifications

Monitor

LCD profile wide screen ratio	16:9 (7¨)
Wide view angle (CR>10)	70/70 (up/down)
	50/70 (left/right)
Resolution	800*3 (RGB) *480 (pixels)
Brightness (cd/m^2)	400
Contrast ratio	500:1
Response time (ms) (at25°C)	20
Power requirement	12/24V DC
Power consumption	≤5W
Operating temperature range	-20°C~+70°C
Storage temperature range	-30°C~+80°C
Dimension	190(L)*125(W)*38(D)
Weight approx	400±10g

Camera

Image type	Colour sony CCD
Resolution	PAL: 500 (H) x 582 (V)
	NTSC: 510 (H) x 492 (V)
Image size	1/4 inch
Lens	2.6mm, F2. 0
Lens Angle	88,2°
Synchronization	Internal
Horizontal resolution	420 TV lines
Power supply	DC 12V±10%
Power Consumption	≤2.5W
Signal to noise ratio	≥48dB
Operating temperature range	-20°C~+70°C
Storage temperature range	-30°C~+80°C
Dimension	76(L)*73.5(W)*54.5(D)
Weight	260g

Accessories in kit:

Extension Cable (for camera)	x1pc
Monitor Bracket	x1pc
3M Y cable (monitor 2 inputs)	x1pc
Sunvisor (monitor)	x1pc
Remote controller	x1pc
Fastener kit	x1pc