

USER MANUAL

For MAGCAM -- REMOVABLE WIRELESS BATTERY OPERATED CAMERA



Please read this manual thoroughly before operating the unit,
and keep it for further reference.

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Product/Service Description

1.1 Product Context

A battery powered wireless camera product that is specifically designed for tractor trailer vehicles and/or unmarried vehicles on the road. This camera system will provide a removable (magnetic) camera and monitoring solution to better assist drivers overcome the blind spots around their tractors and trailers.

1.2. User Characteristics

Tractor Trailers are among the largest vehicles on the road. Because of their size and the amount of deliveries they make, they are often times found required to maneuver in very tight spaces at the delivery destinations, along our highways or parking structures. Currently, because the tractor and trailer are not permanently connected to each other, there is no way to run cables to and from the cab of the tractor back to the trailer, especially since the tractor usually operates different trailers. This solution is using wireless RF technology and a combination of specially designed magnetics, cameras, and rechargeable batteries. Most trailers (93%+) do not have power being sent from the tractor to the trailer. A battery powered wireless solution addresses this need in the automotive industry. **Solution:** This wireless camera system can be attached to any trailer, in a nonpermanent manner, using magnets and batteries enclosed in a single housing where the camera is located. Today, while the driver is backing into a loading dock or driving in a “populated” parking lot/structure, he is often required to have a spotter and turn on his flashers and use his mirrors. This magnetic, rechargeable, wireless camera can now be attached to any part of the trailer and provide immediate infrared, night vision, video to the cab through an existing or one of our proprietary monitors. The camera will NOT “crosstalk” with any other cameras as it is individually paired with a monitor/receiver at any given time. Following product generations will add a solar panel and permanently mounted camera, recharged using photovoltaic cells.

1.3. Operation

This wireless backup camera system is designed to be used temporarily for difficult tractor/trailer maneuvers; it is NOT A PERMANENT SYSTEM FOR DRIVING ON THE ROAD.

WARNING: The driver must insure that the unit is removed from the back of the trailer before continuing driving.

The monitor unit has a secondary Red LED indication that pairing was interrupted.

2. Precautions

● Storage and keeping

1. Do not expose the monitor to excessive heat or cold. The storage temperature of

this device is -20 ~+65°C, and the operating temperature is -10 ~+65°C. The

Humidity is Rh90%.

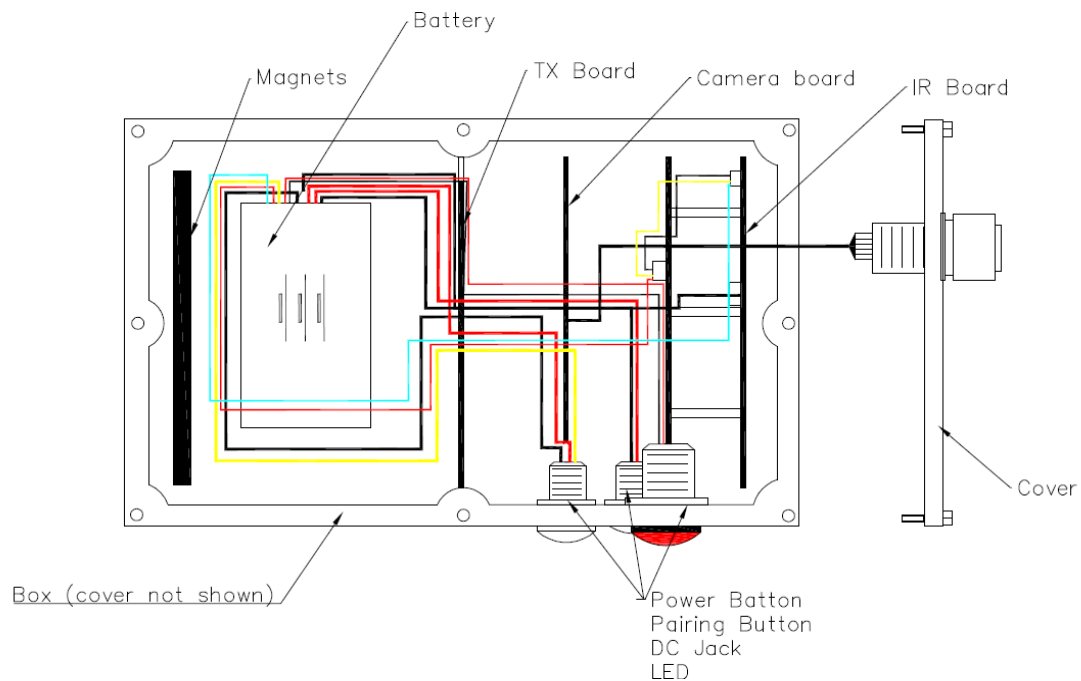
2. Never use this device near a bathtub, wash basin, kitchen, damp basement, swimming pool or similar place.
3. Never use this device in environments with excessive moisture, dust or smoke.
4. Avoid dropping or striking this device.

5. Avoid using this device in enclosed spaces, areas with excessive vibration or subject to severe impacts.
6. Never puncture, scratch or use abrasive cleaning materials on this device.
7. Do not place cables where they may be pinched or stepped on.
8. Leave at least a 2" space between the unit and walls, or other objects to allow adequate air circulation around the unit.
9. The wireless camera must be removed and stored back in the driver cabin before continuing driving.

● Operating Precautions

1. The device has a Lithium Ion battery. Charging can be powered by a 12 volt automotive battery or vehicle electrical system.
2. For monitor/Receiver and Charger, make sure all cables are connected properly observe polarity. Improper cable connections may damage the system. Remove the power cable connections when you do not intend to use the unit.

3. System and components. Diagram and Technical Specifications.



3.1. Wireless RF Transmitter

RF 2.4GHz technology(POWER SUPPLY)	12V
TX (Current Consumption)	TYPE:330mA, Max.400mA
Environmental Specification	
Operating Temperature	-10~+60 °C
Storing Temperature	-30~+85 °C
Operating humidity	85%RH
BASEBAND SPEC.	
POWER ON	2SEC Max. RE
	TBD Max. SE/AV
Latency	100ms Max. RE
	TBD Max. SE/AV
Resolution	VGA/640X480 RE
	PAL:720X576/NTSC:720X480 SE/AV
Frame Rate	30f/s
	NTSC:30f/s/PAL: 25f/s SE/AV
Video Codec	MPEG4
TX (Video in System)	PAL/NTSC Auto detection
(Voice Sample Rate)	8KHz M RE/SE
	48KHz AV
(Voice Frequency Band)	340Hz~3.4KHz RE/SE
	20Hz~20KHz AV
(ID) / (BIT)	Pairing) /22(4KK)
(SYSTEM Architecture)	ARM9(32Bit) SOC
(RF SPEC.)	
(Operation Frequency)	2403 ~ 2478MHz*
(RF Impedance)	50Ω, Typ.

FCC Certification Requirements

Caution: Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the 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 a residential installation. 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 harmful interference to radio or television 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.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.