User Manual

RVC-W1
RVC-W2

Wireless Camera & Reciever Kit

ECHOMASTER PRO

Installation Guide

RVC-W1/RVC-W2
Wireless Camera & Receiver Kit

Introduction

Thank you for purchasing your EchoMaster Wireless Camera & Receiver.

This EchoMaster camera with receiver is designed to improve safety during driving by providing high quality images of surrounding areas and obstacles in the vicinity of the vehicle.

Please ensure you read and understand all aspects of this manual before fitting or using your EchoMaster camera. Choose a suitable mounting place dependant on the application. Ensure that there are no wiring harnesses or hoses/pipes located behind this panel before drilling.

Box Contents

RVC-W1

- Camera (with built in TX)
- Camera Power Cable
- 2 x Red Male Spades
- 2 x Antenna Caps
- Hole Saw
- Receiver (RX)
- 2 x Red T-tap
- 2 x 10mm screws
- 3 x Cable Ties
- Double Sided Tape
- User Manual

RVC-W2

- Camera (with built in TX)
- Camera Power Cable
- Power & Video Cable (Length 150mm)
- Receiver Extension Cable (Length 3657mm)
- 2 x Red Male Spades
- 2 x Antenna Caps
- Hole Saw
- Receiver (RX)
- 2 x Red T-tap
- 2 x 10mm screws
- 3 x Cable Ties
- Double Sided Tape
- User Manual

RVC-W1/RVC-W2
Wireless Camera & Receiver Kit

Pairing the Camera

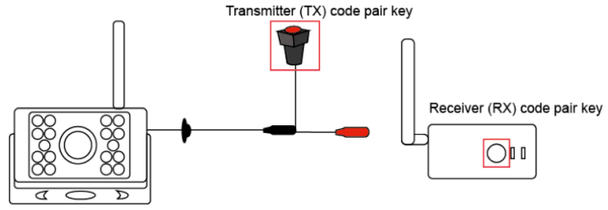
1. The Camera & Receiver are automatically paired. There is no need to pair again unless you need to replace the receiver module or camera
2. The pairing code is needed in the event of losing connection due to weak signal strength, but it this is rare.

How to pair:

When the message **“Please press pair key on tx side”** appears on the receiver (RX screen) Press and hold the receiver (RX) Pair Code key for 1-3 seconds.

Within 30 seconds **Press and Hold** the transmitter (TX) Pair Code Button for **1-3 seconds.** Pairing will then start.

Once pairing is complete **‘PAIR OK’** will appear on the receiver (RX screen)



Wiring Diagram & Pin-Out

Camera wiring

Red (Power) – Locate the **+Parking Lamp** wire in the vehicle/trailer. Connect this wire to the camera red power cable

Black (Ground) – Locate a suitable location to ground (negative) the Black wire in the wiring harness. You may connect this wire to a factory ground point in the vehicle, or attach a ring terminal to the black wire and screw into the body of the vehicle/trailer. If you choose to screw into the body, clean the area of any paint or adhesives to allow for good metal-to-metal contact.

Wire connections are illustrated in the 2 diagrams on the next page.

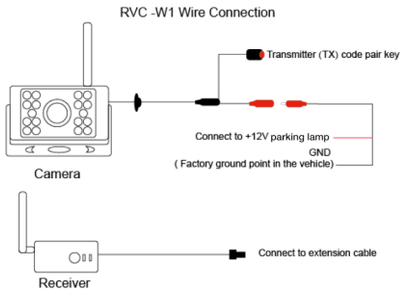
Installation Guide

ECHOMASTER PRO

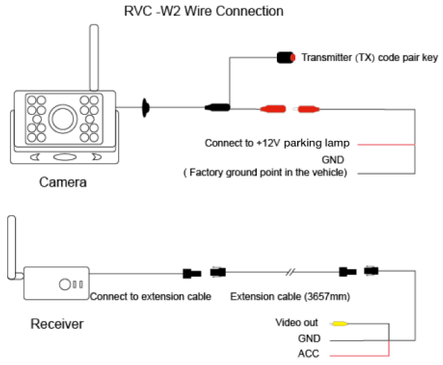
RVC-W1/RVC-W2
Wireless Camera & Receiver Kit

Wiring Diagram & Pin-Out (continued)

RVC-W1



RVC-W2



Specifications

Camera (with built-in TX)	
Image device	1/3 inch color sony CCD
TV system	NTSC
Effective pixels	811*494pixels
Sensing area	5.59mm x4.68mm
Sync. system	internal
Resolution	480 TV lines
Minimum illumination	0Lux/(infrared LED on)
Night Vision range	More than 8M
Lens angle	120 degrees

RVC-W1/RVC-W2
Wireless Camera & Receiver Kit

S/N ratio	more than 48db (AGC-OFF)
Electronic shutter	1/10,000 seconds
Video output	RCA connector, 1.0vp-p, 75ohm
Current consumption	<=300mA
Power supply	DC 12V±10%
Operating temperature	-20 to 65 degrees centigrade, RH95% Max.
Storage temperature	-35 to 85 degrees centigrade, RH95% Max.
Dimensions:	87mm*61.6mm*65.9mm
Weight	500g
Other items	automatic white balance, AGC and BLC

Transmitter (TX)	
DC Characteristics	
POWER SUPPLY	DC 12V±10%
Environmental Specification	
Operating Temperature	"-20~+65 °C
Storing Temperature	"-35~+85 °C
Operating humidity	85%RH
BASEBAND SPEC	
POWER ON	2S Max.
Latency	150mS Max.
Resolution	VGA (640X480) /D1 (720X480)
Frame Rate	VGA:30f/s/D1: 25f/s
Video Codec	MPEG4
Video in System	PAL/NTSC Auto detection
Voice Sample Rate	16KHz/12BIT ADC ADPCM/PCM
Voice Frequency Band	20Hz~20KHz
ID BIT	Pairing / 22(4KK)
SYSTEM Architecture	RISC(32Bit) SOC

Installation Guide

ECHOMASTER PRO

RVC-W1/RVC-W2
Wireless Camera & Receiver Kit

RVC-W1/RVC-W2
Wireless Camera & Receiver Kit

ECHOMASTER PRO

RF SPEC	
Operation Frequency	2406 ~ 2476MHz*
RF Impedance	50E, Typ.
Voltage Standing Wave Ratio	2:01
Output Power	17dBm with Power control
RF (RF Bit Rate)	4Mbps
Modulation	FSK/GFSK
Spread Spectrum	FHSS
Overlapping Hopping Channel	20
Hopping Rate	1200/S
CRC (CRC Check Bit)	16
Line of Sight Range	>200M
Receiving Sensitivity	--88dBm@4MHZ
RSSI (RSSI Level)	4
Video Charactertistics	
Video Output impedance	75E, Typ.
Video Output Level	1Vp-p, Typ.
Video Polarity	NEGATIVE
Video Frequency Respone	±5 dB, Max. 50Hz ~ 6MHz

Receiver (RX)

DC Characteristics	
POWER SUPPLY	DC 12V±10%
Current Consumption	Max.230mA
Environmental Specifications	
Operating Temperature	"-20~+65 ºC
Storing Temperature	"-35~+85 ºC
Operating humidity	85%RH
Baseband Spec	
POWER ON	2S Max.
Latency	150mS Max.
Resolution	VGA 640X480/ D1 720X480
Frame Rate	VGA:30f/s/D1: 25f/s
Video Decode	MPEG4
Video in System	PAL/NTSC Auto detection
Voice Sample Rate	16KHz/16BIT DAC ADPCM/PCM
Voice Frequency Band	20Hz~20KHz
RF Spec	
Operation Frequency	2406~ 2476MHz*
RF Impedance	50D, Typ.
Voltage Standing Wave Ratio	2:01
Output Power	≥17dBm with Power control
RF Bit Rate	4Mbps
Modulation	FSK/GFSK
Spread Spectrum	(FHSS)
Overlapping Hopping Channel	20
Hopping Rate	1200/S
CRC (CRC Check Bit)	16
Line of Sight Range	>200M
Receiving Sensitivity	--88dBm@4MHZ
RSSI (RSSI Level)	4