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> Cwmiibili FPV 1.2G 1.5W VTX VRX Kit Instruction Manual

Cwmiibili I500741993

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Model: I500741993

1. INTRODUCTION

This manual provides comprehensive instructions for the Cwmiibili FPV 1.2G 1.5W VTX VRX Kit. This kit is designed for long-range First Person View (FPV) applications with RC drones, offering stable video transmission and reception. It operates on the 1.2G/1.3G frequency band, known for its excellent diffraction capabilities and strong anti-interference properties, making it suitable for various complex environments.

2. IMPORTANT SAFETY INFORMATION

WARNING: This product requires an amateur radio license to operate legally. Please check your local laws and regulations before purchasing and operating this device. Failure to comply with local regulations may result in penalties.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- 1x FPV Video Receiver Unit
- 1x FPV Video Transmitter Unit
- 2x Antennas (one for receiver, one for transmitter)
- 1x RCA Video/Audio Cable (typically 3-RCA to 3-RCA)
- 1x Power/Video/Audio Cable (for transmitter connection)



Figure 3.1: Overview of the Cwmiibili FPV 1.2G 1.5W VTX VRX Kit, showing the receiver, transmitter, antennas, and connecting cables.



Figure 3.2: Included RCA video and audio cables for connecting the receiver to a display device.

4. PRODUCT FEATURES

- **Stable 1.5W Power Output:** Ensures consistent performance without power degradation due to overheating.
- **Metal Shell Design:** Provides superior shielding against interference, contributing to longer transmission distances and improved signal integrity.
- **8-Channel Adjustable Frequency:** Easy and quick channel selection via integrated buttons.

5. SPECIFICATIONS

Feature	Specification
Working Frequency Band	1.2G / 1.3G

Feature	Specification
Transmitter Power Output	1.5W (1500mW)
Receiver Sensitivity	-92dbm
Channels	8 channels (selectable)
Unobstructed Range	Up to 2 KM (with 5dB omnidirectional antenna, up to 5 KM in open areas; up to 10 KM with high-gain directional antenna)
Product Dimensions	7.48 x 3.15 x 3.15 inches (approximate, for the kit)
Item Weight	9.6 ounces (approximate, for the kit)
Material	Aluminum alloy (housing)
Color	Silver



Figure 5.1: A test setup demonstrating the receiver's sensitivity, showing a reading of -92.0 dBm on a spectrum analyzer.



Figure 5.2: The transmitter unit being weighed on a digital scale, showing a weight of 27.3 grams.

6. SETUP INSTRUCTIONS

6.1 Receiver Connection

1. **Connect Antenna:** Screw the provided antenna onto the 'ANT' connector on the receiver unit. Ensure it is finger-tight.
2. **Connect Video/Audio Output:** Use the RCA cable to connect the 'VIDEO OUT' and 'AUDIO OUT' ports on the receiver to the corresponding video input ports on your display device (e.g., FPV monitor, goggles, or TV).
3. **Connect Power:** Connect a 12V DC power source to the 'DC 12V' input port on the receiver. Ensure correct polarity.



Figure 6.1: Detailed view of the receiver's connection ports and controls, including the antenna connector, power input, and video/audio outputs.

6.2 Transmitter Connection

1. **Connect Antenna:** Screw the provided antenna onto the antenna connector on the transmitter unit.
2. **Connect Power/Video Input:** Connect the transmitter's power and video input cable to your FPV camera and drone's power supply. Refer to your drone's wiring diagram for specific connections.

7. OPERATING INSTRUCTIONS

7.1 Power On/Off

Once all connections are secure, apply power to both the receiver and transmitter units. The digital display on both units should illuminate.

7.2 Channel Selection

The transmitter and receiver must be set to the same channel for proper operation. Both units feature a digital display and control buttons for channel adjustment.

1. **Identify Control Buttons:** Locate the small buttons next to the digital display on both the transmitter and receiver.
2. **Adjust Channel:** Press the control button(s) to cycle through the available 8 channels. The digital display will show the currently selected channel number.
3. **Match Channels:** Ensure the channel displayed on the transmitter matches the channel displayed on the receiver for optimal signal reception.

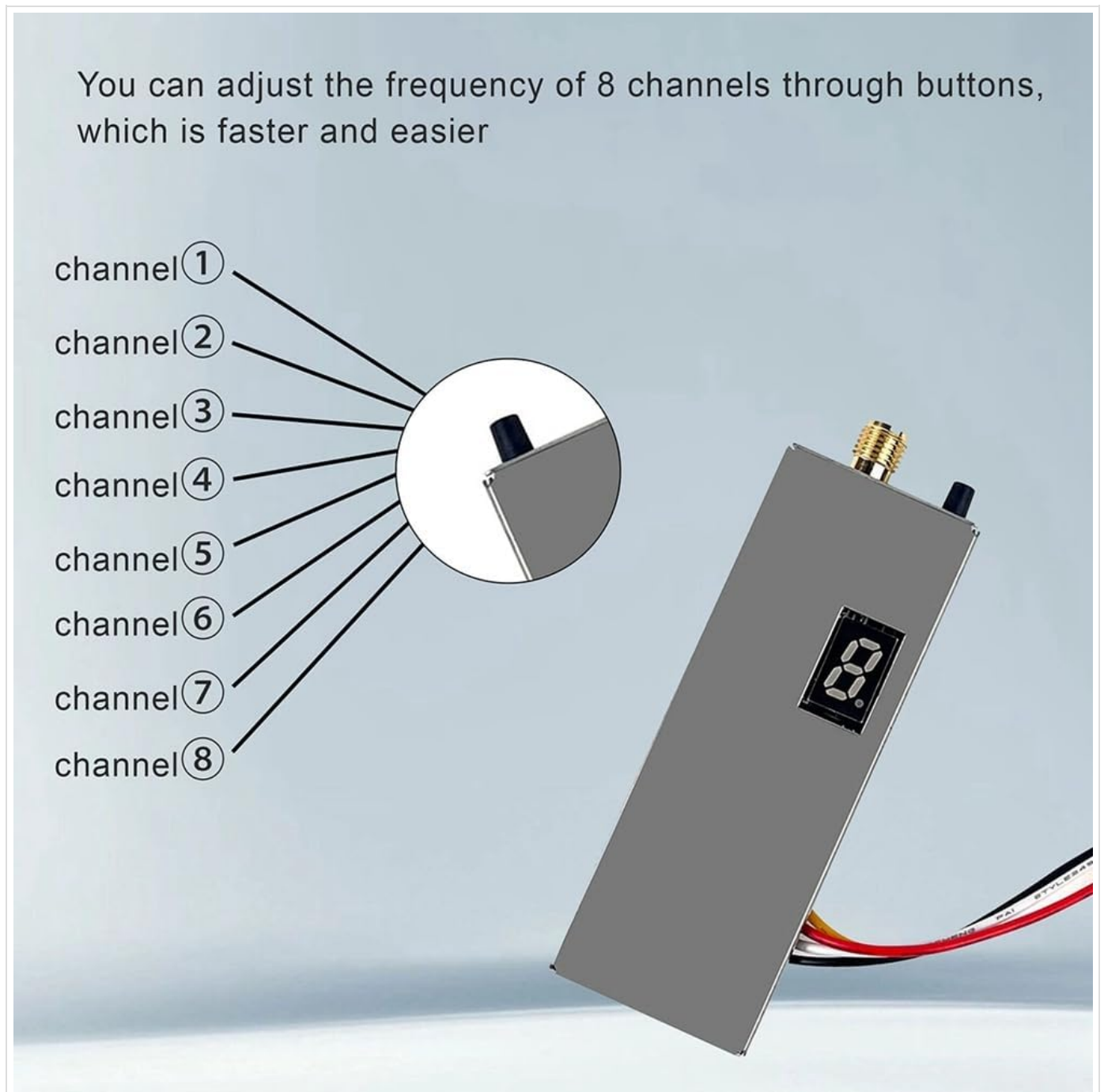


Figure 7.1: Illustration of the 8-channel selection mechanism on the transmitter unit, indicating how channels are changed using the control buttons.

8. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the units. Avoid using liquid cleaners or solvents.
- **Antenna Care:** Always ensure antennas are securely attached before operation. Avoid bending or stressing the antenna connectors.
- **Storage:** Store the kit in a cool, dry place away from direct sunlight and extreme temperatures when not in use.

9. TROUBLESHOOTING

- **No Video Signal:**
 - Ensure both transmitter and receiver are powered on.
 - Verify that both units are set to the same channel.
 - Check all cable connections (power, video, audio) for proper seating and integrity.
 - Confirm the FPV camera is functioning and connected correctly to the transmitter.
- **Poor Video Quality/Interference:**
 - Ensure antennas are securely attached and oriented correctly.
 - Try changing to a different channel to avoid interference from other devices.
 - Reduce the distance between the transmitter and receiver.
 - Check for obstructions between the transmitter and receiver.
 - Ensure the metal casing of the VTX is not damaged, as it provides shielding.
- **Unit Not Powering On:**
 - Verify the power source is providing the correct voltage (12V DC) and sufficient current.
 - Check power cable connections for any breaks or loose contacts.

For further assistance, please contact Cwmiibili customer support.

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