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› [SoloGood FPV VTX Rush Tank II V2 RUSHFPV 5.8G FPV Video Transmitter Instruction Manual](#)

SoloGood Rush Tank II V2

SoloGood FPV VTX Rush Tank II V2 Instruction Manual

Model: Rush Tank II V2

1. PRODUCT OVERVIEW

The SoloGood FPV VTX Rush Tank II V2 is a high-quality 5.8G FPV Video Transmitter designed for FPV racing drones. It features a robust design with a fully covered metal casing for protection, strong anti-interference capabilities, and efficient power filtering. This VTX supports a wide input voltage range and offers switchable power outputs, including PIT mode, 25mW, 200mW, 500mW, and 800mW, ensuring stable transmission for various flight conditions. Its advanced LOCK-ON technology helps eliminate frequency drift, allowing multiple drones to operate simultaneously without interference.

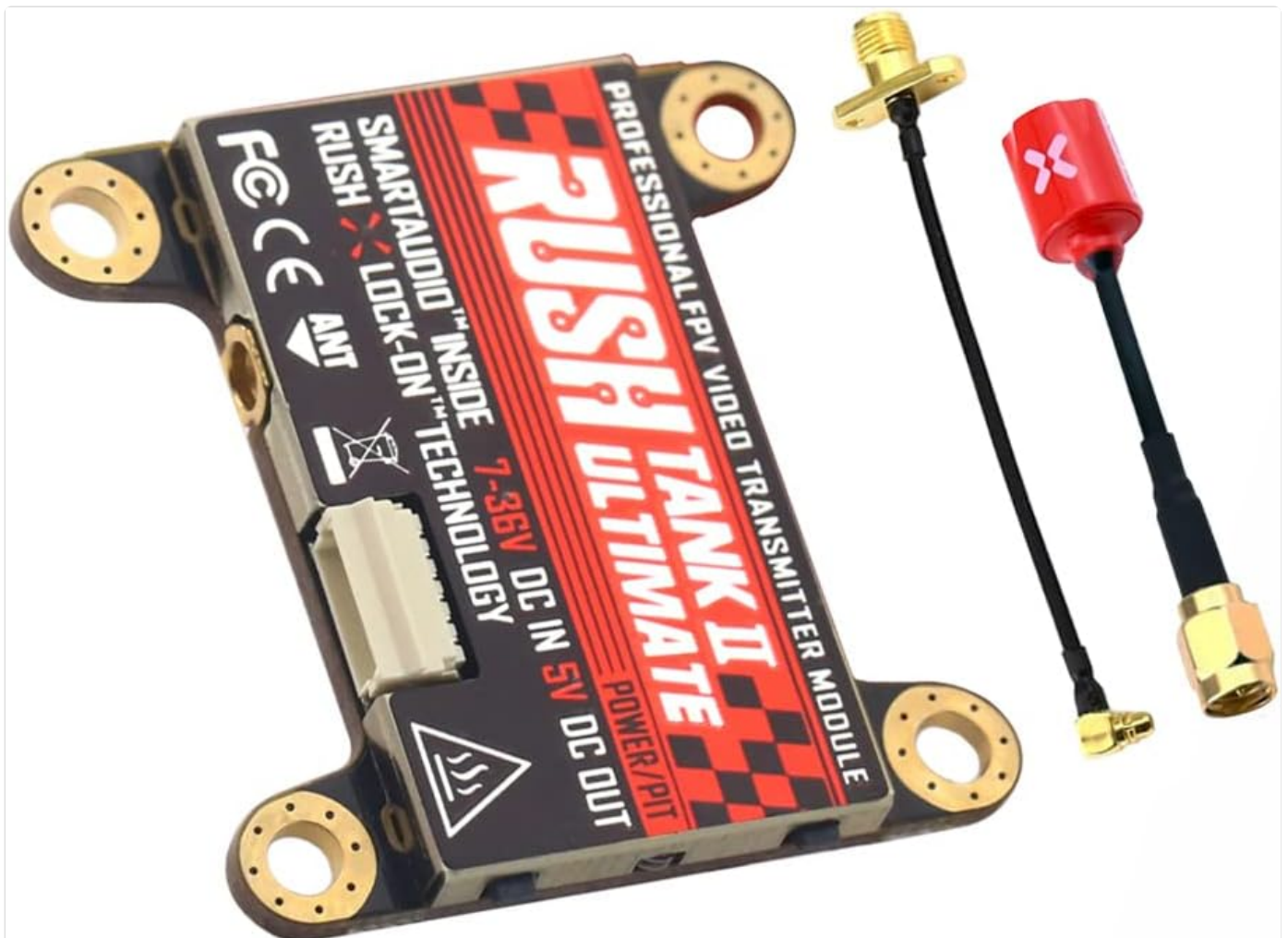


Figure 1.1: The SoloGood FPV VTX Rush Tank II V2 video transmitter module shown with the included Foxeer Micro Lollipop antenna and an MMCX to SMA cable.

2. PACKAGE CONTENTS

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

- 1x RUSH TANK II V2 VTX
- 1x MMCX to SMA Cable
- 1x 6pin Harness
- 1x Foxeer Micro Lollipop Antenna (Red SMA Male)

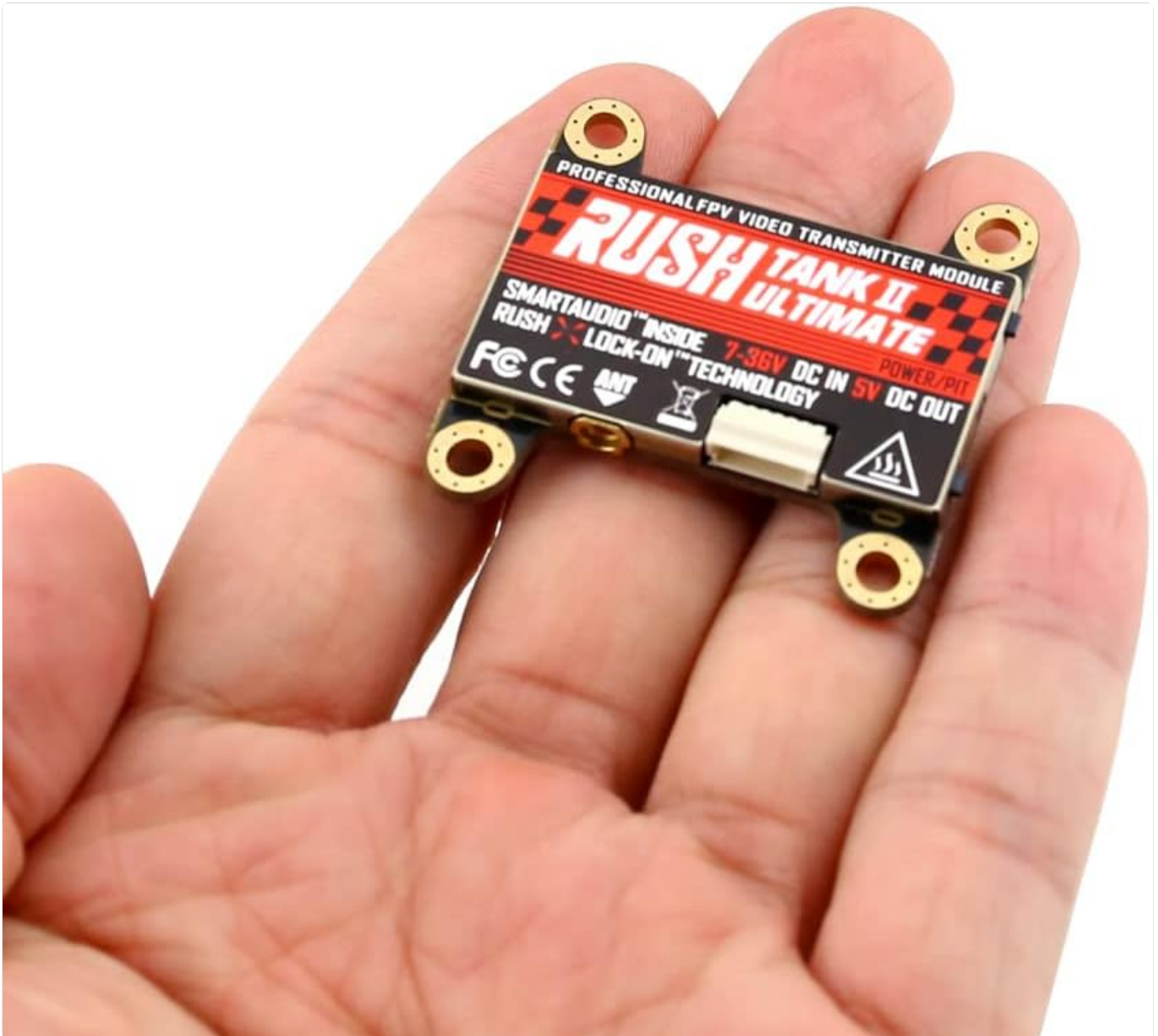


Figure 2.1: All components included in the product package, featuring the VTX module, antenna, cables, and documentation.

3. SETUP

3.1 Wiring Diagram

Carefully follow the wiring diagram to connect the VTX to your flight controller and power source. Ensure correct polarity to prevent damage.



Figure 3.1: Detailed wiring connections for the Rush Tank II V2, showing power input, video signal, and ground connections.

- **VIN:** Connect to your main battery voltage (7-36V DC).
- **GND:** Connect to ground.
- **VOUT:** 5V 1A output for camera power.
- **VIDEO:** Connect to your camera's video output.
- **AUDIO:** Connect to your camera's audio output (if applicable).
- **SMARTAUDIO:** Connect to a UART TX pad on your flight controller for OSD control.

3.2 Antenna Connection

Connect the Foxeer Micro Lollipop Antenna to the VTX using the provided MMCX to SMA cable. Ensure the connection is secure to maintain signal integrity.



Figure 3.2: Close-up view of the MMCX connector on the VTX and the SMA female connector, illustrating how the adapter cable connects.



Figure 3.3: The Rush Tank II V2 VTX with the Foxeer Micro Lollipop antenna securely attached, ready for installation.

4. OPERATING INSTRUCTIONS

4.1 Powering On

Once correctly wired, apply power to your drone. The VTX will power on and begin transmitting on the last selected channel and power level. Observe the LED indicators on the VTX for status.

4.2 Changing Settings (Channels, Power)

The Rush Tank II V2 supports SmartAudio for convenient configuration via your flight controller's OSD (On-Screen Display) or a compatible radio transmitter. Refer to your flight controller's firmware documentation (e.g., Betaflight, EmuFlight) for specific instructions on enabling and using SmartAudio.

- **Channel Selection:** Navigate through the OSD menu to the VTX section to select your desired band and channel.
- **Power Output:** Adjust the transmission power (PIT/25/200/500/800mW) via the OSD. Always select the lowest power necessary for your flying environment to minimize interference with others.

4.3 Pit Mode

Pit Mode transmits at a very low power level (typically 0.01mW or less) to allow for safe setup and testing of your drone without interfering with other pilots. Activate Pit Mode when performing maintenance or before a race to avoid disrupting active video feeds. The VTX will indicate Pit Mode status via its LEDs.

5. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your Rush Tank II V2 VTX.

- **Cleaning:** Keep the VTX free from dust, dirt, and moisture. Use a soft, dry brush or compressed air for cleaning. Avoid liquid cleaners.
- **Physical Inspection:** Regularly inspect the VTX for any signs of physical damage, loose connections, or bent pins.
- **Antenna Care:** Ensure the antenna is securely attached before every flight. A loose or damaged antenna can significantly reduce transmission range and potentially damage the VTX.
- **Heat Management:** While the VTX has a metal casing for heat dissipation, ensure it has adequate airflow during operation, especially at higher power settings. Avoid prolonged operation on a workbench without proper cooling.

6. TROUBLESHOOTING

This section addresses common issues you might encounter with your FPV VTX.

Problem	Possible Cause	Solution
No video signal / Black screen	Incorrect wiring (Video IN/OUT), loose camera connection, VTX not powered, incorrect channel/band selected.	Check all wiring connections. Ensure VTX is receiving power. Verify camera is functioning. Confirm VTX and receiver are on the same band and channel.
Poor video quality / Static / Short range	Damaged or loose antenna, interference from other electronics, low power setting, incorrect antenna polarization.	Ensure antenna is securely attached and undamaged. Increase VTX power output (if safe and legal). Check for sources of electrical noise. Ensure both VTX and receiver antennas have matching polarization (LHCP/RHCP).
VTX gets very hot	Operating at high power without sufficient airflow, short circuit.	Ensure adequate airflow around the VTX. Reduce power output if not needed. Immediately disconnect power and inspect for short circuits if overheating is extreme.

Problem	Possible Cause	Solution
Cannot change VTX settings via OSD	SmartAudio not enabled/configured on flight controller, incorrect UART connection.	Verify SmartAudio is enabled and configured correctly in your flight controller firmware. Check the SmartAudio wire connection to the flight controller's UART TX pad.

7. SPECIFICATIONS

Detailed technical specifications for the SoloGood FPV VTX Rush Tank II V2.

Feature	Specification
Input Voltage	7-36V DC
Output Voltage	5V 1A (for camera)
Input Current	40mA@Pitmode, 95mA@25mW, 185mA@200mW, 250mA@500mW, 380mA@800mW
Power Output	PIT/25/200/500/800 mW Switchable
Audio Support	Yes
Dimensions (H*W*D)	36mm x 36mm x 4.5mm (1.42 x 1.42 x 0.18 inches)
Mounting Holes	30.5mm x 30.5mm (M3)
Weight	6.8g (RUSH TANK II V2 including cable) + 5g (Foxeer Micro Lollipop Antenna)
Number of Channels	48
Antenna Connector	MMCX
Manufacturer	RUSH
ASIN	B0B1LSXV2Q
UPC	736961513715

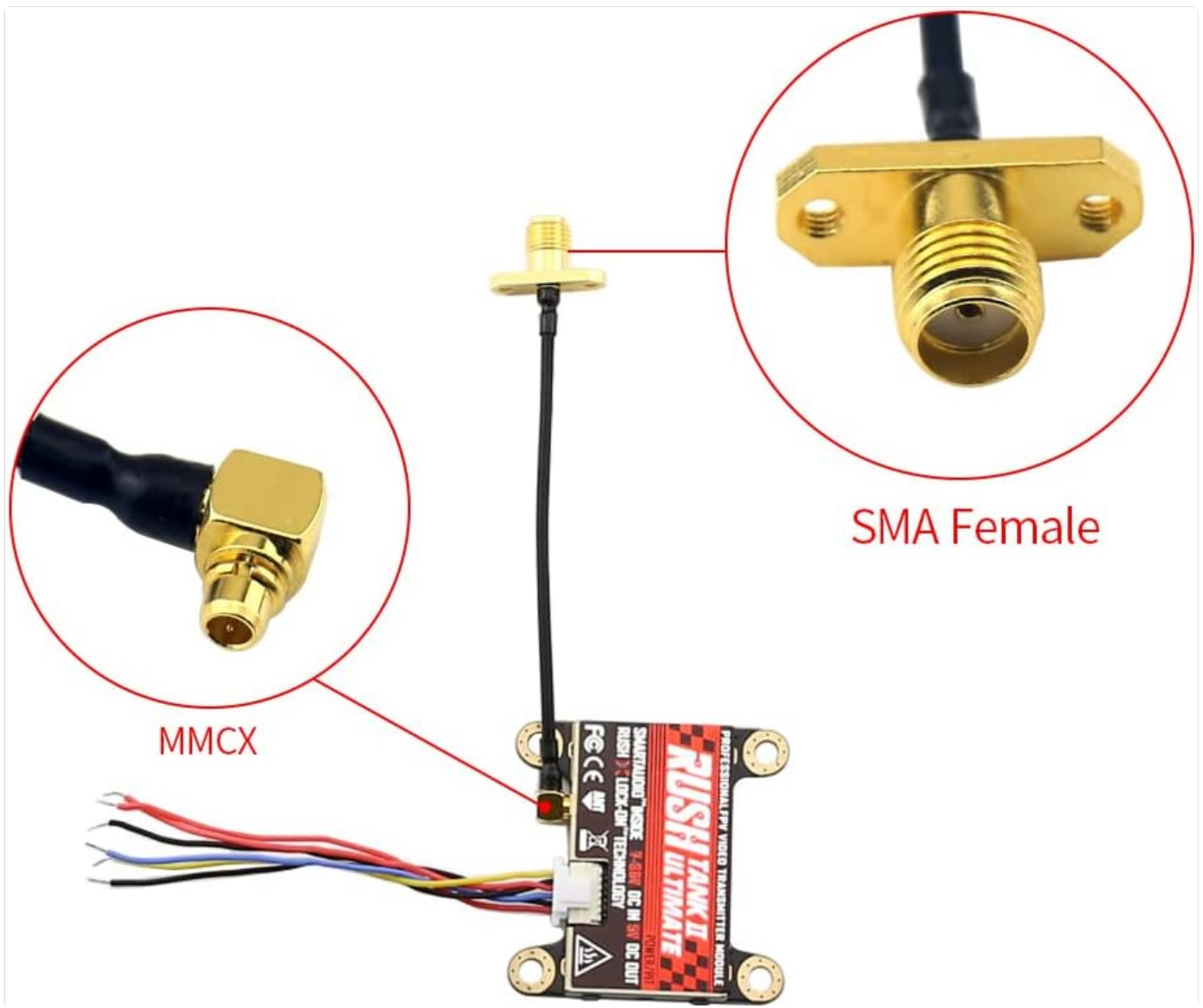


Figure 7.1: Top-down view of the VTX module, illustrating its compact dimensions and mounting hole positions.

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official SoloGood website or contact their customer service directly. Keep your purchase receipt as proof of purchase for any warranty claims.

- **Online Resources:** Check the SoloGood official website for FAQs, firmware updates, and additional support documentation.
- **Customer Service:** Contact SoloGood customer support for assistance with product issues or technical inquiries.