# Speedy Bee

# VTX-DVR Manual

## VTX

### ◇ Instruction diagram



- 5V-OUT
- GND
- VIDEO IN
- IRC
- GND
- 7-26V

VTX Button
MIC
MMCX

1 **Blue** CH LED
1 **Orange** Power LED
6 **Red** Band LEDs
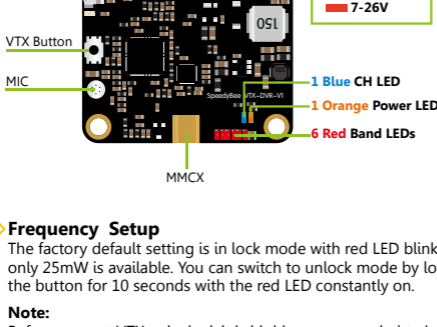
### ◇ Frequency Setup

The factory default setting is in lock mode with red LED blinking and only 25mW is available. You can switch to unlock mode by long pressing the button for 10 seconds with the red LED constantly on.

**Note:**
Before you get VTX unlocked, it is highly recommended to know about the rules and regulations in your country about the frequency to avoid a fine or confiscation of your device.

**Button Function Switching**
· Short press to CH;
· Long press 2 seconds to BAND;
· Long press 5 seconds to POWER;
· Long press 10 seconds to Unlock/Lock Mode.

### ◇ LED Status

**1 Blue** CH LED
CH1 ON, CH2~8 OFF;

**6 Red** Band LEDs
Represents respectively 1~6 Band
Red LED **blinks**—Lock Mode
Red LED **constantly on**—Unlock Mode

**1 Orange** Power LED
Orange LED **blinks quickly**—PIT Mode
Orange LED **off**—25mW
Orange LED **blinks slowly**—200mW
Orange LED **constantly on**—600mW

### ◇ Frequency Table

| Channel | CH1 | CH2 | CH3 | CH4 | CH5 | CH6 | CH7 | CH8 |
|---|---|---|---|---|---|---|---|---|
| 1 BosCam A | 5865 | 5845 | 5825 | 5805 | 5785 | 5765 | 5745 | 5725 |
| 2 BosCam B | 5733 | 5752 | 5771 | 5790 | 5809 | 5828 | 5847 | 5866 |
| 3 BosCam E | 5705 | 5685 | 5665 | 5645 | 5885 | 5905 | 5925 | 5945 |
| 4 FatShark | 5740 | 5760 | 5780 | 5800 | 5820 | 5840 | 5860 | 5880 |
| 5 Race Band | 5658 | 5695 | 5732 | 5769 | 5806 | 5843 | 5880 | 5917 |
| 6 Low Race | 5362 | 5399 | 5436 | 5473 | 5510 | 5547 | 5584 | 5621 |

200mW  600mW  Lock

## 1. Flight controller wiring

(Take UART4 for example)
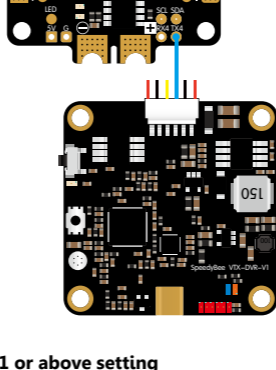


## 2.Betaflight 3.1 or above setting

(Take UART4 for example)

| Identifier | Configuration/MSP | Serial Rx | Telemetry Output | Sensor Input | Peripherals |
|---|---|---|---|---|---|
| USB VCP | 115200 | | Disabled  AUTO | Disabled  AUTO | Disabled  AUTO |
| UART1 | 115200 | | Disabled  AUTO | Disabled  AUTO | Disabled  AUTO |
| UART2 | 115200 | | Disabled  AUTO | Disabled  AUTO | Disabled  AUTO |
| UART3 | 115200 | | Disabled  AUTO | Disabled  AUTO | Disabled  AUTO |
| UART4 | 115200 | | Disabled  AUTO | Disabled  AUTO | IRC Tramp  AUTO |
| UART5 | 115200 | | Disabled  AUTO | Disabled  AUTO | Disabled  AUTO |
| UART6 | 115200 | | Disabled  AUTO | Disabled  AUTO | Disabled  AUTO |

* If you connect VTX to Flight Controller (BetaFlight 3.3 or above) IRC Tramp protocol, the VTX will in your Flight Controller and its frequency will be changed to F1 5740 and the button on VTX will give no more reaction.

* If you need to get 200/600mW & all 48 channels unlocked, please first of all disconnect VTX from Flight Controller IRC Tramp and then long press the button on VTX for 10 seconds till the red LED is always on.

## 3. Remote control

(Take Mode-2 for example)
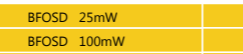
① BFCMS-FEATURES-VTX TR



② Change Selection



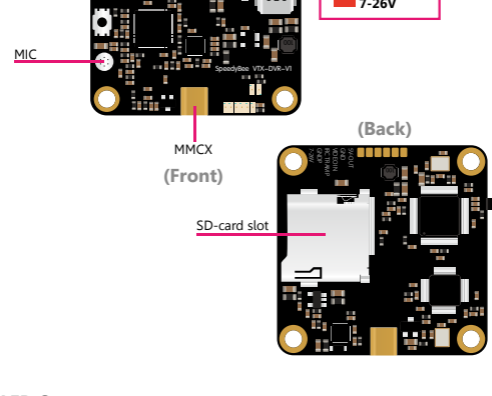③ Edit Setting Values



| BFOSD  25mW | VTX  25mW |
|---|---|
| BFOSD  100mW | VTX  25mW |
| BFOSD  200mW | VTX  200mW |
| BFOSD  400mW | VTX  600mW |
| BFOSD  600mW | VTX  600mW |

## VTX

### ◇ Instruction diagram



- 5V-OUT
- GND
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- IRC
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- 7-26V

DVR Button
Green LED
MIC
MMCX

(Front)
(Back)
SD-card slot

### ◇ LED Status

**Green LED for DVR** Constantly on — In standby mode

Green LED Blinks slowly (1 time per second) — In recording mode

Green LED Blink quickly (2 times per second) — Micro SD is full or failed to be recognized

### ◇ Format Micro SD Card

* In standby mode, long press the button for 5 seconds, the SD card will be formatted and recording will start.

### ◇ Start Recording

* Record automatically with power on (Micro SD Card should be inserted in first).

* In standby mode, short press the button to start recording.

* In standby mode, long press the button, about 5 seconds, till the Green LED is off, the SD card will be formatted and recording will start.

### ◇ Stop Recording

* In recording mode, short press the button, file will be saved and DVR will turn to standby mode.

### ◇ Parameter

| Model | | Speedy Bee VTX-DVR |
|---|---|---|
| **DVR** | Video in | CVBS@1Vp-p 75Ω |
| | Encoder | MJPEG@AVI |
| | Resolution | VGA ( 640 × 480 ) @ 30fps ( NTSC ) / 25 fps ( PAL ) |
| | Audio | Built-in MIC |
| | Micro SD Card | Max 32G |
| **VTX** | Frequency Channel | 5.8G 48CH |
| | Output Power | 25mW/200mW/600mW |
| | Video Input Impedance | 75 Ohm |
| | Antenna Connector | MMCX |
| | Power in | DC 7-26V |
| | Working Current | DC 9V @Max 450mA |
| | Power out | DC 5V @Max 250mA |
| | Net Weight | 7.5 g (without antenna) |
| | Dimension | 36mm*36mm @30.5 × 30.5 M3 holes |

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