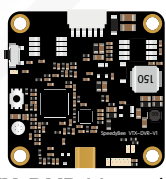
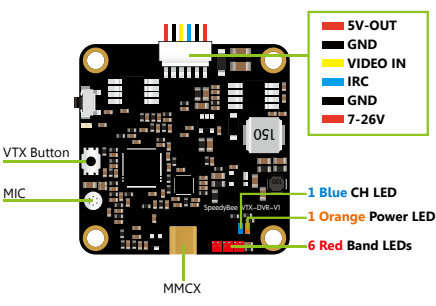
Speedy Bee®



VTX-DVR Manual

VTX

◇Instruction diagram



◇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

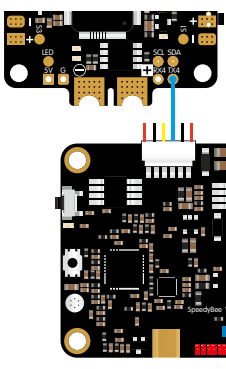
1 Orange Power LED
Orange LED **blinks quickly**—PIT Mode
Orange LED **off**—25mW
Orange LED **blinks slowly**—200mW
Orange LED **constantly on**—600mW

◇Frequency Table

200mW 600mW Lock

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

1. Flight controller wiring (Take UART4 for example)



2.Betaflight 3.1 or above setting

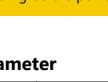
Identifier	Configuration/MS	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO
UART1	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO
UART2	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO
UART3	115200		Disabled AUTO	Disabled AUTO	Disabled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

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

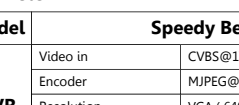
* If you need to get 200/600mW & all 48 channels unlocked, please long press the button on VTX for 10 seconds till the red LED is always on.

3. Remote control (Take Mode-2 for example)

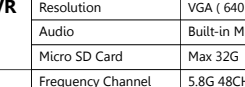
❶ **BFCMS-FEATURES-VTX TR**



❷ **Change Selection**



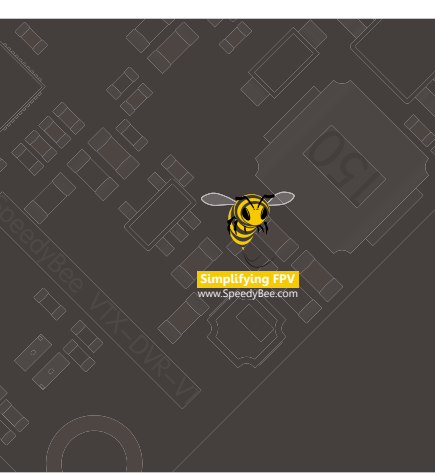
❸ **Edit Setting Values**



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

DVR

◇Instruction diagram



◇LED Status

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

Green LED Blink 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.

Warning
* Recording files will be saved automatically by segment per each 5 minutes and recording stops when Micro SD card is full.

* It takes about 3G capacity for 1 hour recording. Thus an 8G Micro SD card can record about 2.5 hours.

* DVR won't save the file automatically after power off. So please stop recording before power off. Otherwise, you will miss your last recording.

◇Parameter

Model	Speedy Bee VTX-DVR	
DVR	Video in	CVBS@1Vp-p 75Ω
	Encoder	MJPEG@AVI
	Resolution	VGA (640 x 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

Simplifying FPV
www.SpeedyBee.com