

SpeedyBee

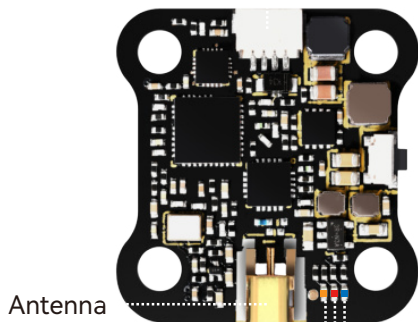
# TX ULTRA USER MANUAL

# Instruction Diagram

JST connector

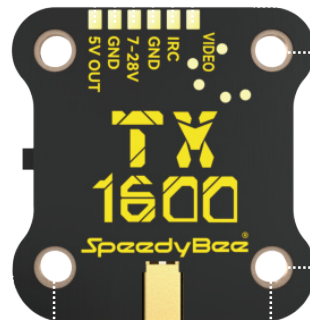
Power in 7-28V  
GND  
Power out 5V

GND  
IRC  
VIDEO



Antenna

Mode Switch Button



20mm

29mm

Channel (Blue LED)  
Band (Red LED)  
Power (Orange LED)

20mm

28mm

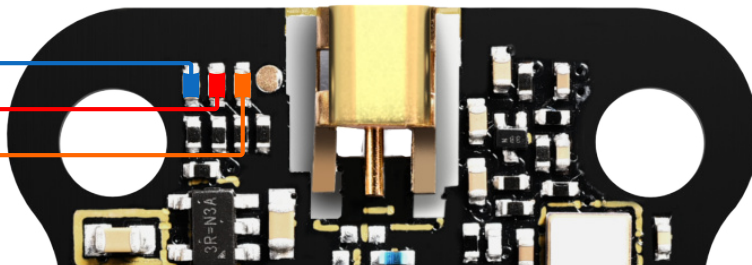
Notice: Please use the screws to install and fix the TX ULTRA as the mainboard and the cover are separated.

## LED LIGHT

CHANNEL

BAND

POWER



Lock

Unlock

Blue LED  
Channel

**Constantly ON:** The current frequency point is Channel 1

**OFF:** The current frequency point is one of Channel 2~Channel 8.

Red LED  
Band

Red LED **will keep blinking**, at this time the Red LED is not used to indicate the current Band information.

**Constantly ON:** the current band is Band1,

**OFF:** the current band is one of Band 2 ~ Band 6.

Orange LED  
Power

Orange LED **will keep blinking**, at this time the Orange LED is not used for indicating the current Power information.

Light OFF ————— 25mW  
Blinking once in 3 seconds — 200mW  
Blinking once in 2 second — 800mW  
Blinking once in 1 second — Max mW  
Blinking 4 times in 1 second (fastFlash) ————— PIT mode

## Key Operation

Short press the button to switch CH1/2/3/4/5/6/7/8.

Long press the button for 2 seconds to enter the BAND mode; then short press to switch band1/2/3/4/5/6.

Long press the button for 4 seconds to enter the POWER mode; then short press to switch to 25/200/800/Max mW.

Long press the button for 10 seconds to unlock/lock.

# Support IRC Tramp Protocol

TX ULTRA supports the IRC TRAMP protocol and the modification of video transmission parameters through the remote control, including frequency, working power and so on. If your flight controller supports Bluetooth or WIFI, you can also modify the video transmission parameters through the SpeedyBee app.

**NOTE:** For BetaFlight flight controller firmware above BetaFlight 4.1.0, you need upload a VTX Table to the flight controller before using the remote control to modify the video transmitter parameters normally.

SpeedyBee-TX ULTRA (CE) .json  
SpeedyBee-TX ULTRA (USA) .json

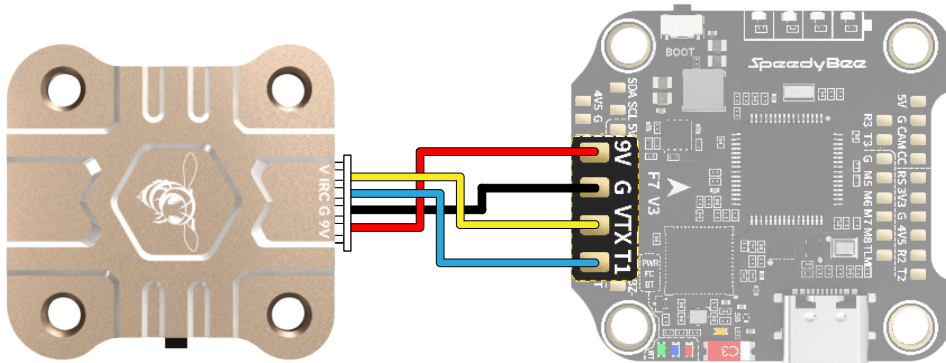
For the use of the video transmitter table, please refer to this article  
"How to Setup Betaflight VTX Table – SmartAudio Tramp VTX Control"  
by Oscar Liang



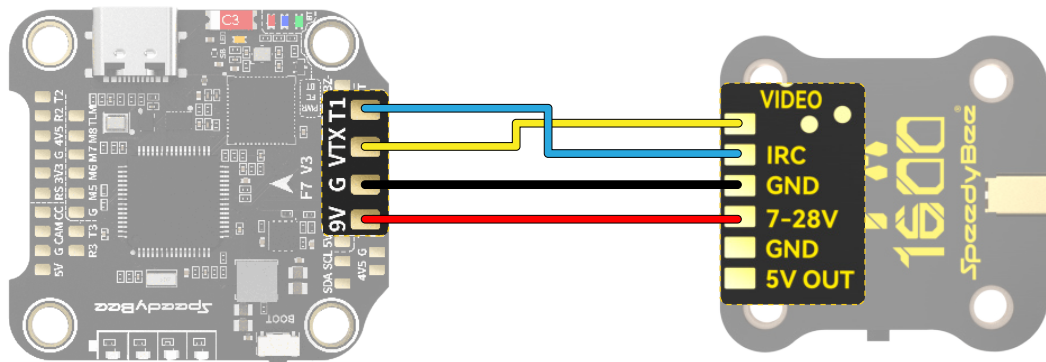
# 1. Flight controller wiring

Note: Take UART1 for example

JST Connection:



Pad Connection:



## 2.BetaFlight 4.1 or above setting

Identifier	Configuration/MSP	Serial Rx	Telemetry Output		Sensor Input		Peripherals	
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	▾	AUTO ▾
UART2	<input type="checkbox"/> 115200 ▾	<input checked="" type="checkbox"/>	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART3	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART4	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART5	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾	AUTO ▾	ESC ▾	AUTO ▾	Disabled ▾	AUTO ▾
UART6	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾	Disabled ▾	AUTO ▾

## 3. Remote control

Note: Take Mode-2 for example

1 BFCMS-FEATURES-VTX TR



2 Change Selection



3 Edit Setting Values



## Frequency Table

Orange is a disabled channel in locked state

ChanNel	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
1 Band A	5865	5845	5825	5805	5785	5765	5745	5725
2 Band B	5733	5752	5771	5790	5809	5828	5847	5866
3 Band E	5705	5685	5665	5645	5885	5905	5925	5945
4 Airwave	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