

## EWRF 5.8G FPV VTX OSD Setting

EWRF 5.8G Audio/Video transmitters work well with several other commonly used Betaflight/Cleanflight FCs when using OSD setting. Almost all F3 and F4 targets (except for those with integrated VTX) are supported.

Refer below on how to use OSD setting to change your VTx parameters. EWRF VTXs settings of bands, channels, power and Pitmode through OSD is dependent on the flight controller firmware.

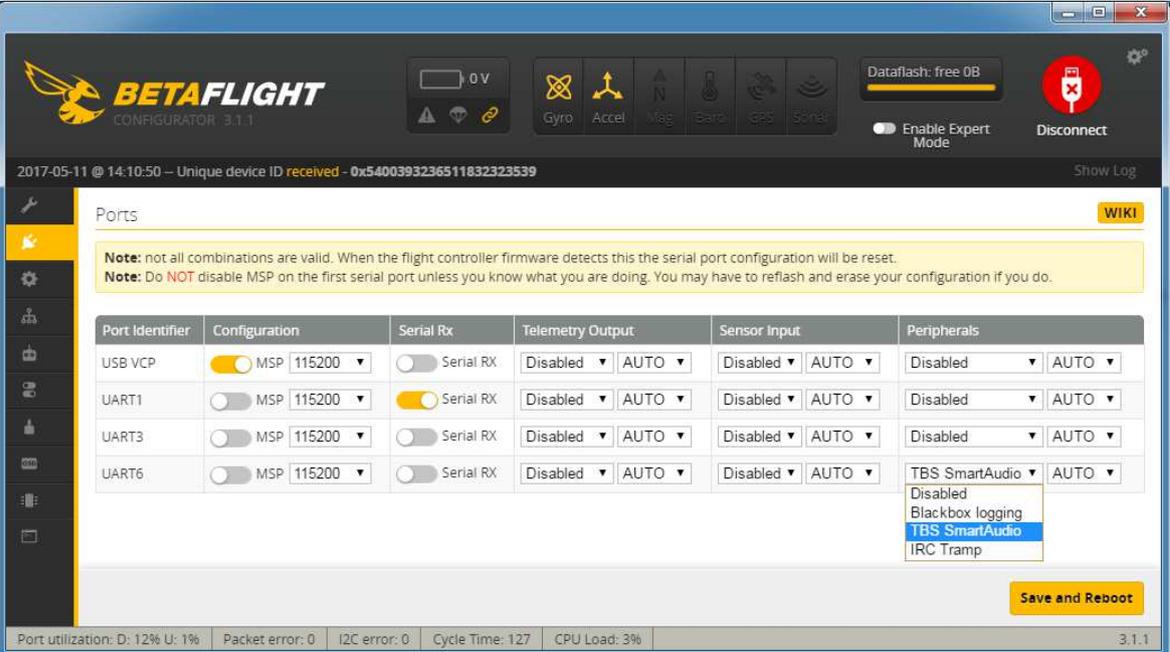
### 1 Connection and configuration

#### 1.1 F3/F4 flight controllers with integrated BetaFlight OSD

- Wire three pins PWM/OSD, VIDEO IN and GND of the VTX to the
- PWM/OSD OUT to the Tx pin of a free Uart
- VIDEO OUT and GND to the Flight Controller accordingly.
- Ensure the Flight Controller is running Betaflight firmware Release 3.1 or later.
- Then connect the FC to Betaflight configurator.
- Make sure "VTX" button in the configuration tab is enabled

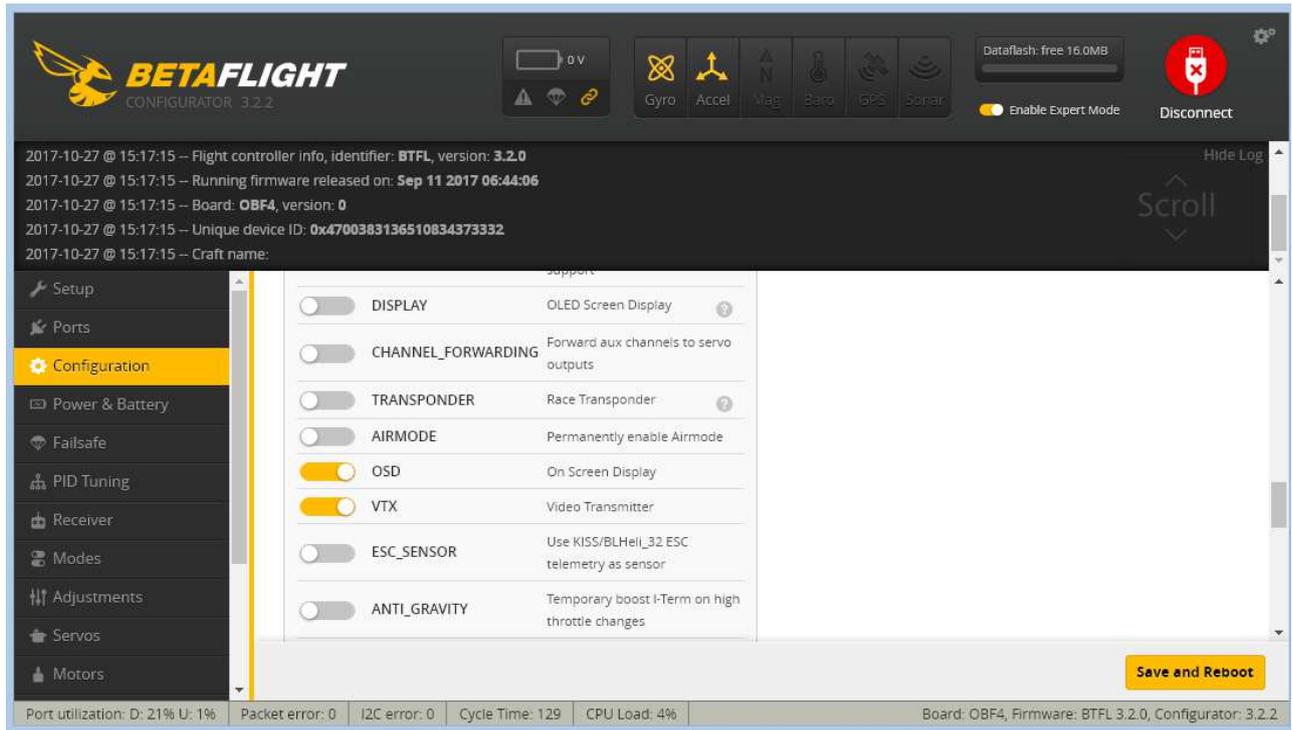
#### 1.2 Port Configuration

Open Ports tab, on UART Port the Vtx is connected to, select TBS SmartAudio from Peripherals drop down menu



The screenshot displays the Betaflight Configurator 3.1.1 interface. At the top, there's a header with the Betaflight logo and various system status indicators like battery level (0V), sensor status (Gyro, Accel, Mag, Baro, GPS, Sonar), and a 'Dataflash: free 0B' indicator. Below the header, the 'Ports' tab is active, showing a table of serial ports. The table has columns for 'Port Identifier', 'Configuration', 'Serial Rx', 'Telemetry Output', 'Sensor Input', and 'Peripherals'. The UART6 port is selected, and a dropdown menu is open under the 'Peripherals' column, showing 'TBS SmartAudio' as the selected option. The status bar at the bottom shows 'Port utilization: D: 12% U: 1%', 'Packet error: 0', 'I2C error: 0', 'Cycle Time: 127', 'CPU Load: 3%', and the version '3.1.1'.

Port Identifier	Configuration	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> MSP 115200	<input type="checkbox"/> Serial RX	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART1	<input type="checkbox"/> MSP 115200	<input checked="" type="checkbox"/> Serial RX	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART3	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Serial RX	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART6	<input type="checkbox"/> MSP 115200	<input type="checkbox"/> Serial RX	Disabled   AUTO	Disabled   AUTO	TBS SmartAudio   AUTO



## 2 Accessing Betaflight OSD

### 2.1 Getting into Betaflight OSD CMS (Configuration Menu System)

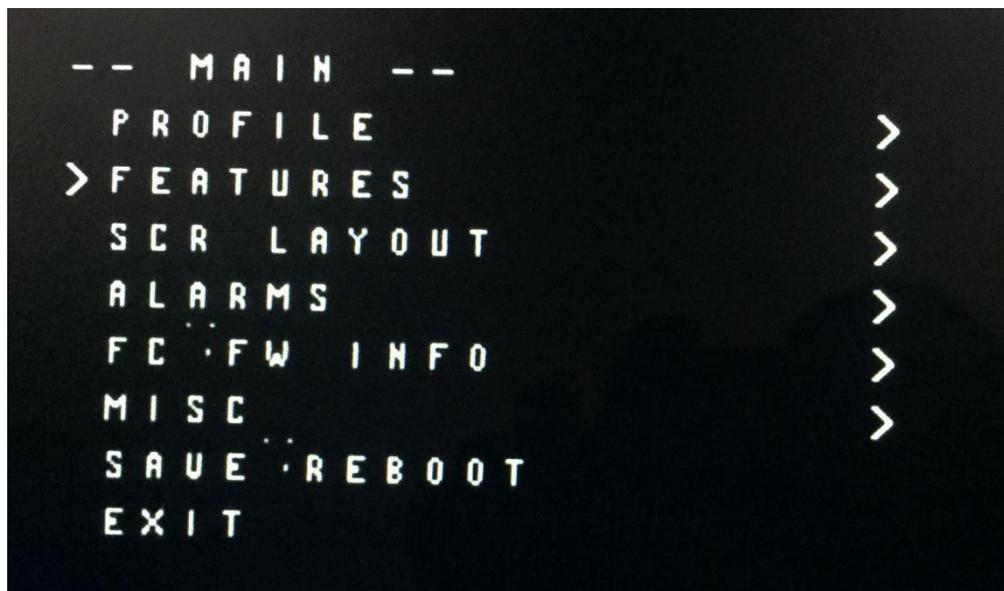
When powering up your craft, the below screen will appear on your FPV receiver screen receiver.



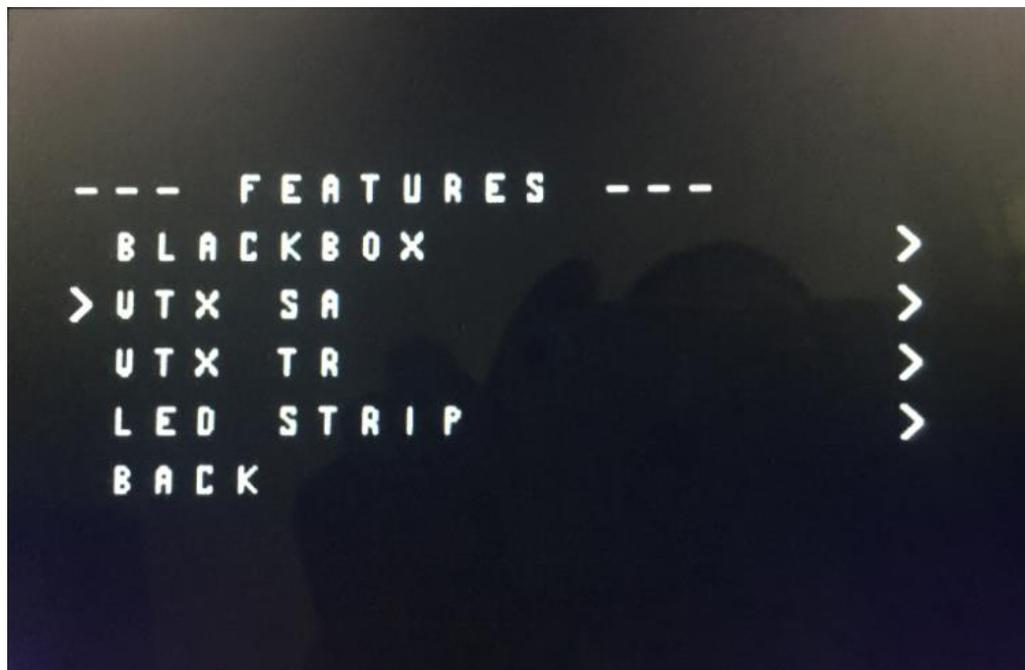
To access the OSD setting page: Throttle middle, Yaw left and Pitch up

### 3 BAND and Channel Setting

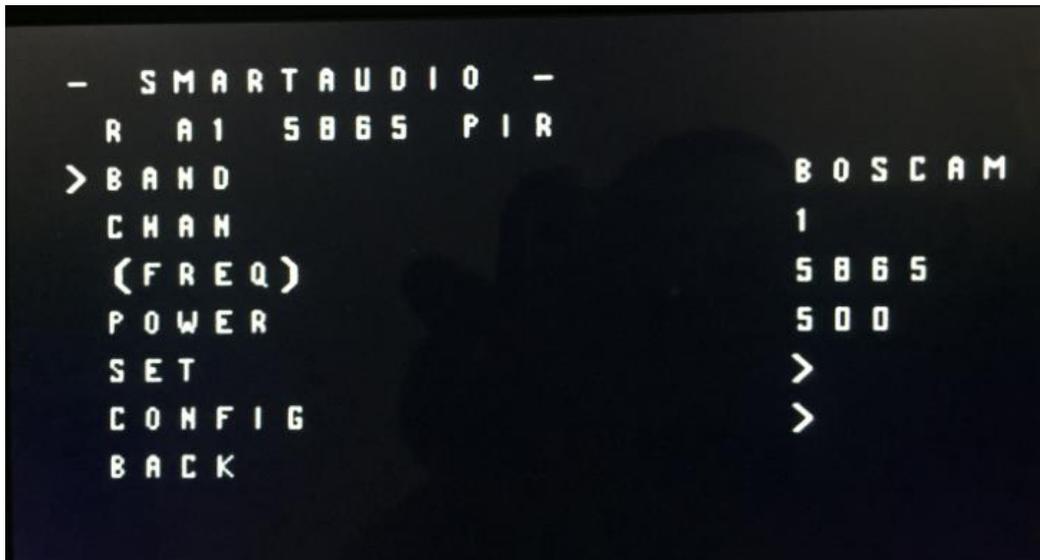
Use Pitch stick to move the cursor and select FEATURES



Use Roll stick to enter FEATURE Menu shown below:



Select VTX SA and enter its menu as shown in figure below. Within the VTX SA menu, use Roll stick to choose the band



**Notes:** EWRF AV transmitters support 48 channels, however they are selectable only through the button on the VTX. Currently channel and band selection through Betaflight OSD only supports 40 channels.

After choosing the band and channel, to save, navigate to SET and select YES to save



your setting as below

#### 4 Transmitting Power Setting

Follow the same procedure as in the previous section navigate to POWER..

EWRf e708/709TM3 support only three transmitting powers of 25mw, 200mw and 600mw. There are four power options of 25mw, 200mw, 600mw and 800mw in the menu of OSD setting. When you make power selection , please note that the selecting of 500mw or 800mw, that transmitting power of the EWRf VTx will be set to 600mw .

EWRf 7082TM supports transmitting power of 25mw, 100mw and 200mw, doase note that the selecting of 25mw in the menu is set to 25mw, selecting of 200mw in the menu is set to 100mw and selecting of 600mw or 800mw VTx is set to 200mw.

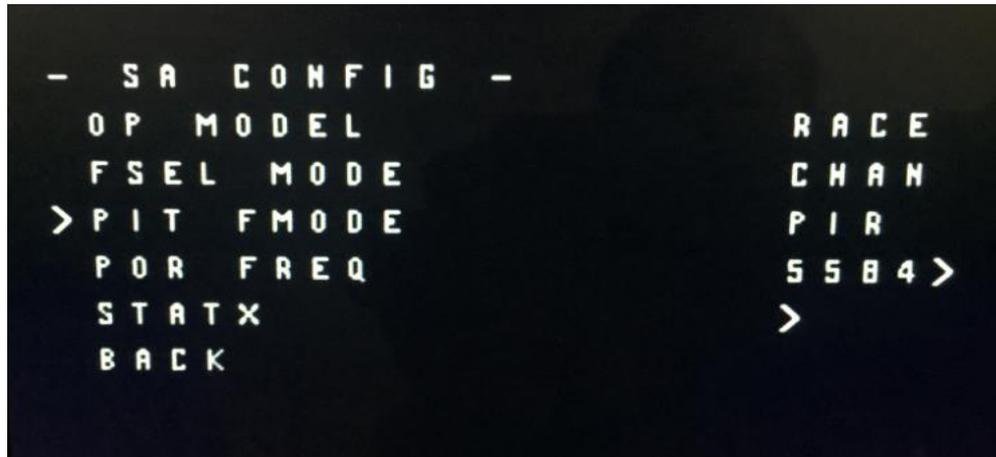
**Notes:** Power setting is effective immediately which is different from the setting of the band and channel.



## 5 PitMode Setting

PitMode is a feature that set the Vtx to a very low amplitude of power output, it allows the user to power up the video transmitter to change settings or perform tests on the craft without interfering with others. When working in PitMode, the VTx transmitting distance is less than 2 meters .

To set PITMODE from the OSD, navigate to CONFIG, then select PitMode setting shown below



Using the Pitch stick move the cursor to PIT FMODE, use the Roll stick to toggle:

- left to exit the PitMode (PIR)
- right to enter the PitMode (POR)

Notes: After powering up the VTX and FC again, PitMode status will be saved even if the default PIR will display on the screen upon powering up. Ignore "POR or PIR" if it appears on the screen. The indication of PITMODE status is the LED on the VTX.