FPV Flying Wing

Assembly Schematic

Parameter Table

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wingspan</td>
<td>820mm</td>
</tr>
<tr>
<td>Length</td>
<td>405mm</td>
</tr>
<tr>
<td>Weight</td>
<td>170 grams (Without electronic equipment)</td>
</tr>
<tr>
<td>Radio</td>
<td>3 channels with elevon mixing</td>
</tr>
<tr>
<td>Servo</td>
<td>9 grams x 2 pcs</td>
</tr>
<tr>
<td>Battery</td>
<td>1500-1800 mAh 3S 40C-60C</td>
</tr>
<tr>
<td>ESC</td>
<td>20A–30A</td>
</tr>
<tr>
<td>Motor</td>
<td>2204/2300KV–2205/2300KV</td>
</tr>
<tr>
<td>Prop</td>
<td>Max6045 (5045/6045)</td>
</tr>
</tbody>
</table>

This is not a toy.
Age recommendation: not suitable for children under 14 years old.
FPV Flying Wing

Assembly Schematic

WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury. This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision.
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The elevons should have a slight upward deflection, when the controls are neutral.

Cut the fill blocks according to the size of the camera.

Need to add 70 grams of weight in the nose when a GOPRO camera is not installed.

NOTICE: Remove the propeller and the propeller adapter from the motor shaft during control surface adjustments. Any movement of the throttle will cause the propeller to spin.

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PRODUCT SPECIFICATION

MODE: TX200

FR

<table>
<thead>
<tr>
<th>FR</th>
<th>CH1</th>
<th>CH2</th>
<th>CH3</th>
<th>CH4</th>
<th>CH5</th>
<th>CH6</th>
<th>CH7</th>
<th>CH8</th>
</tr>
</thead>
<tbody>
<tr>
<td>FR1 (A)</td>
<td>5865MHz</td>
<td>5845MHz</td>
<td>5825MHz</td>
<td>5805MHz</td>
<td>5785MHz</td>
<td>5765MHz</td>
<td>5745MHz</td>
<td>5725MHz</td>
</tr>
<tr>
<td>FR2 (B)</td>
<td>5733MHz</td>
<td>5752MHz</td>
<td>5771MHz</td>
<td>5790MHz</td>
<td>5809MHz</td>
<td>5828MHz</td>
<td>5847MHz</td>
<td>5866MHz</td>
</tr>
<tr>
<td>FR3 (C)</td>
<td>5705MHz</td>
<td>5685MHz</td>
<td>5665MHz</td>
<td>5645MHz</td>
<td>5685MHz</td>
<td>5905MHz</td>
<td>5925MHz</td>
<td>5945MHz</td>
</tr>
<tr>
<td>FR4 (D)</td>
<td>5740MHz</td>
<td>5760MHz</td>
<td>5780MHz</td>
<td>5800MHz</td>
<td>5820MHz</td>
<td>5840MHz</td>
<td>5860MHz</td>
<td>5880MHz</td>
</tr>
<tr>
<td>FR5 (H)</td>
<td>5658MHz</td>
<td>5695MHz</td>
<td>5732MHz</td>
<td>5769MHz</td>
<td>5806MHz</td>
<td>5843MHz</td>
<td>5880MHz</td>
<td>5917MHz</td>
</tr>
<tr>
<td>FR6 (L)</td>
<td>5362MHz</td>
<td>5399MHz</td>
<td>5436MHz</td>
<td>5473MHz</td>
<td>5510MHz</td>
<td>5547MHz</td>
<td>5584MHz</td>
<td>5621MHz</td>
</tr>
</tbody>
</table>

Line 1: VDD_IN (7-24V)
Line 2: GND
Line 3: VIDEO_IN
Line 4: AUDIO_IN
Line 5: GND
**Flight Controller Manual**

**VERY IMPORTANT**: The Controller has to re-learn center position after installation, or replacing a new radio system, or making a trimming or Sub-Trim change within the transmitter; otherwise the servos may move to one side automatically when switching to Hold Mode. To do this, just quickly flip the flight mode switch twice between Rate mode and Hold mode within 1 second!

### Features

1. Four Model Types supported: single aileron, dual ailerons, flapperons, delta and vertical.
2. Three Flight Modes supported:
   - Rate Mode: Rate Mode for offset correction.
   - Hold Mode: HOLD mode for attitude hold
   - Gyro Off Mode: Transmitter control the plane directly.
3. Two kinds of Gain Control Method supported: Master Gain from the radio, Independent Axis Gain from the Variable resistor on the Controller board.
4. Using superior algorithm, bringing a more comfortable and more sensitive sense of control.

### Specifications

1. Voltage Range: 5-6V DC. (Do Not Use Dry Cell!)
2. Dimensions: 40mm x 25mm.
3. Weight: 6.5g.

### Packing List

1. Flight Controller board

### Status LED Description

- **LED OFF**: Flight Controller in Gyro Off Mode.
- **LED ON**: Flight Controller in Rate Mode.
- **LED Flash**: Flight Controller in Hold Mode.

**WARNING**: PLEASE READ THE FOLLOWING STEPS VERY CAREFULLY BEFORE YOU START TO INSTALL A NEW PLANE!

#### Step 1: Mounting

The board need to be firmly mounted near the center of the gravity of the plane by using the double-tape provided. Please make sure the longer side of the board is along with the heading direction. After mounting, please check again if the board is attached firmly in the plane.

#### Step 2: Model Type Selection

The DIP switches set the WING mode, please match the type of your aircraft with Normal Airplane (single aileron), Normal Airplane (dual aileron for flapperon), Delta-wing (Flying-wing) and V-tail according to the pictures 1 to 4. If you change any DIP switch settings, power cycle the device to enable the new setting to take effect.

#### Step 3: Wiring

Please connect the control board and the radio receiver using wires provided according to the pictures 1 to 4. Pay attention to the color of wires to avoid anti-plug.

#### Step 4: Switch and Master Gain Channel Configuration

Assign a 3-pos switch to the channel which connected the pins "IN-4" (AUX-IN) for switching the flight mode in flight. When use a 2-pos switch, you can only switch between Rate Mode and Hold Mode, so you cannot switch to Gyro Off Mode. It will be set to Rate Mode by default if switch channel is not connected to the board. If your transmitter has Travel Adjust Function (End Point Adjust Function), you can change the switch channel's End Point to change Master Gain.

#### Step 5: Gyro Direction and Gyro Gain Configuration

Before flight, you have to verify that the gyro compensation direction is OK, otherwise, it could lead to losing control or even crash during the flight! The VR gain POTs on the Flight control the correction gain and direction for each of the pitch (ELE), roll (AIL) and yaw (RUD) axis.

- 5 o'clock = max gain in one direction
- 12 o'clock = zero gain
- 7 o'clock = max gain in the opposite direction

To perform the examination, power on the board, pick the plane up and check it by following the six steps below:

1. **For your first flight, the recommended gain value is 2/10 o'clock!**

#### Step 6: Re-learn Center Position

Quickly flip the flight mode switch three times between Rate mode and Hold mode within 1 second!