

# VRX Manual

*Everything you need to know about the La Forge FPV Main Module.*

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## 1. Overview

The Main Module is a 5.8GHz spectrum scanner with OLED display and a load of features that will forever change the way you FPV.

Designed exclusively for the Fat Shark module bay. With this main module you will immediately have the power to quickly tune into your crafts channel, or scan the spectrum to find a free channel, or even tune into a friends channel.

But it doesn't stop there; add the Diversity Module for an even more reliable FPV experience or get the Transmitting Module that can quickly bind to the Main Module.



## 2. Features

### Save Channel

Startup with last saved channel and settings.

### Screen Saver

Display current channel, call sign, and signal strength.

### Settings Menu

Calibrate RSSI, set call sign, frequency order, save.

### Quick Save

Hold select for 2 seconds in manual mode & Search Mode.

### Status LEDs

Indicates power, status, and active antenna.

### IR Emitter

Quickly bind to the La Forge VTX.

### Three Button navigation

Up, down, select.

### Favorites Mode

Seek between favorite channels.

### Manual Mode

Set channel manually.

### Search Mode

Search next channel based on signal strength.

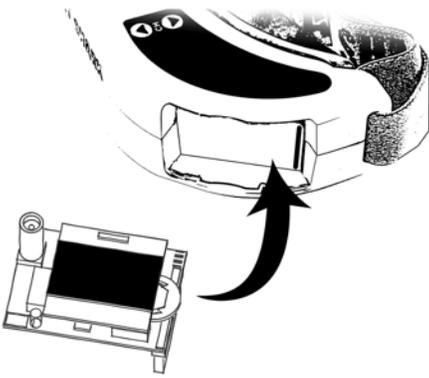
### Scanner

\*Scan spectrum of all 40 channels.

### Clean Power

Large 470uf tantalum capacitor.





## 3. Installation

Main module installation is the same as any other module. Gently seat the 9 pin headers into the module bay receptacle headers.

We have designed the modules to not require any modification of the Fat Shark goggles when mounted externally.

For those wanting the clean internal install we have designed the product to require only minimal modifications to your goggles.

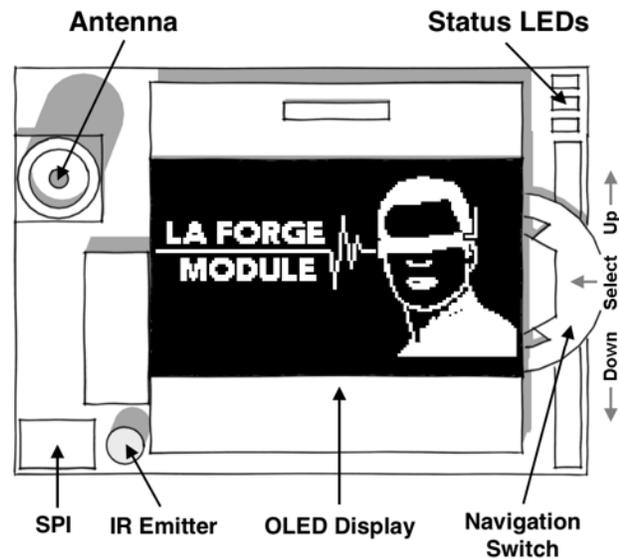
*La Forge FPV does not recommend internal installation and is not responsible for any damage you may cause in doing such modifications.*

<https://www.youtube.com/watch?v=avYOixNPhAA>

### Supported Fat Shark goggles

- Dominators
- Dominator V2
- Dominator V3
- Dominator HD
- Dominator HD V2
- Attitude V3 - Some modification required.

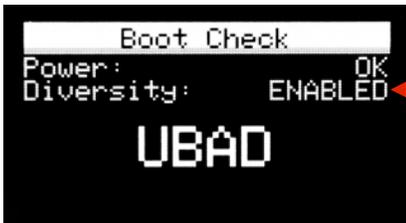
### Product Layout



## 4. Usage

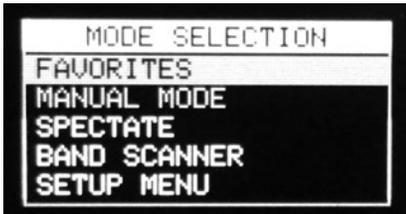


**Boot Logo** - Shown for one and a half seconds. Displays the current Firmware version.



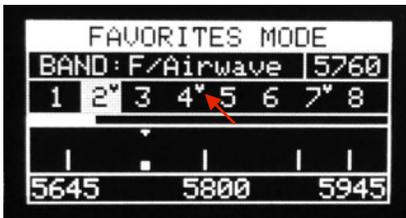
**Boot Check** - Quick hardware check to determine if diversity should be enabled.

When diversity is disabled some screens will not be available.



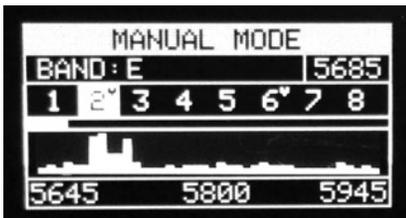
**Mode Selection** - Navigate by using the scroll wheel up and down to the desired operating mode.

You can access this menu by a short press of the select button from any of the following modes.



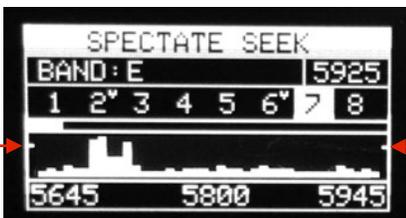
**Favorites Mode** - Using the scroll wheel you can quickly switch between up to 40 favorites. Favorite channels are indicated with a heart shown by the red arrow.

To remove the current favorite press and hold select for 1.5 seconds.



**Manual Mode** - Use the up and down buttons to navigate through all 40 channels. IR emitter is activated in this screen.

To add the current channel to your favorites, press and hold select for 1.5 seconds.



**Spectate Mode** - This mode is designed to scan through the channels looking for a RSSI signal greater than the current threshold shown by the red arrows.

This mode is only intended for spectating and not for flying.



**Band Scanner Mode** - This mode is only for scanning the 5.8GHz spectrum showing the noise floor. "H:" is the highest received RSSI signal and "L:" is the lowest.

Press the up button to reset the scan.



**Screen Saver** - Activates after 60 seconds or when a strong RSSI signal is received. Current Diversity setup is shown in red.

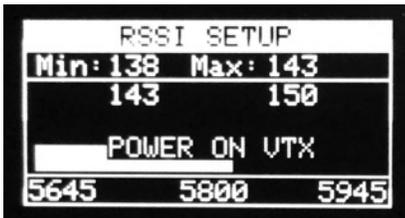
When diversity is disabled only one large bar will be shown.



**Setup Menu 1 - Order:** The order in which you want to scroll through channels or frequencies. **Beeeps:** turns on or off the peeps when diversity is enabled. **Sign:** Your 10 character call sign. **Diversity Menu:** select which antenna to operate with. **Calibrate RSSI:** See RSSI setup screens.

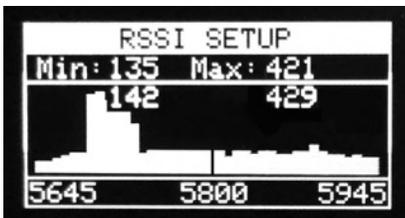


**Setup Menu 2 - VTX Power:** The power level you want the Lafarge VTX to operate at. **VTX Audio:** Ground the audio on the VTX. **VTX Color:** The Color of the LED Strip on the VTX. **Save & Exit:** Save all the current settings to EEPROM for next bootup.



**RSSI Setup** - <https://www.youtube.com/watch?v=IWGahOx2YjE>

1. Power on LaForge with antennas removed
2. Setup Menu then Calibrate RSSI
3. During first sweep power on VTX with antenna installed
4. Aim goggles at VTX and be within 6ft.
5. Done. Results are auto saved.



You only have to calibrate the diversity module to the main module once.

Flashing new firmware wipes out all settings including RSSI calibration. You will have to run it again after every flash.

Transmitting VTX is required to properly calibrate. If none is detected it will attempt to revert to default values. Transmitting Channel does not matter.



**Save Settings** - All user settings are saved to EEPROM memory and reloaded on next power cycle.



## User Notes

## 6. Troubleshooting

### Screen is blank or hard to read

This can happen for a few of reasons but the most common are covered below.

1. Screen may have been damaged. Visually inspect the screen for cracks or chipped glass. If this is the case a screen replacement is required. Use the following tutorial to help guide you through the replacement process.

[https://www.youtube.com/watch?v=T\\_J-MMeqbgU](https://www.youtube.com/watch?v=T_J-MMeqbgU)

2. The initialization command happened too soon after plunging in the battery. This can usually be solved by toggling the module bay power switch on goggles. To reduce the initial load on the Fat Shark regulator power the goggles with the module bay power switch in the off position. After the goggles have powered up then turn on the module bay switch.

### Module is acting strange

If you are constantly switching between receiver modules and adding or removing the diversity plug you may eventually experience a bent pin in the diversity port. Below are a few symptoms of improper seating of the diversity wire harness or bent pin.

- RSSI is always full bars.
- Beeps stopped working.
- LEDs are dim.
- Receiver B video is blank in the diversity menu.

This issue can be fixed by looking very closely at each side of the diversity port and checking for a bent pin. If a pin is bent gently bend it back into place using tweezes. Reseat the wiring harness and verify the issue no longer exists.

If the problem still exists the next thing to check is continuity of every wire on the wiring harness.