

YGE 120/160HV Ver. 4.23 setup with VBar Ver 5.23 Governor

This is for setup with Full Size VBar and Spectrum satellites

1. Transmitter Setup

- a. Your Normal Throttle Curve should be 0 to 100, Throttle Trim at Mid Point

2. VBar Initial Setup:

It is important to setup the VBar before doing any ESC Programming, it is possible to use another method as this one is long.

- a. Power on VBar only, 4 Cell NiMh pack is going to be needed, It's good to have a NiMh pack with a switch plugged into open servo socket on VBar.
- b. In VBar Throttle Endpoints at -100 and +100 in Setup/Transmitter, Adjust with Tx Endpoints as necessary to get -100 and +100.
- c. Governor disabled in Setup/Gov I

3. Initial ESC Test

- a. Motor connected to ESC, **Remove Pinion on Motor, Remove blades**
- b. **Power on Tx, Throttle Low Position**
- c. **Power on VBar** only, 4 Cell NiMh pack is going to be needed, It's good to have a NiMh pack with a switch plugged into open servo socket on VBar.
- d. **Connect LiPo to ESC**
 - i. You should hear 3 descending tones
- e. **This will Power up Motor!**
 - i. **Move Throttle to Middle Position**, Motor should turn in correct direction, if not switch any 2 wires from ESC to Motor.
- f. **Unplug Lipo from ESC, Power off VBar**

4. ESC Setup – Program Card II

a. Wiring

- i. Program Card Left Port (ESC) to ESC Program Cable(short 4" one). (Be sure orange wire is on left of Prog. Card)
- ii. ESC Throttle Rx Cable(Long one) is disconnected
- iii. Program Card Right Port(RX) to VBar Throttle Port.
- iv. 4 Cell Ni MH Pack(NO More than 6.5V) to VBar for Power.

b. Programming

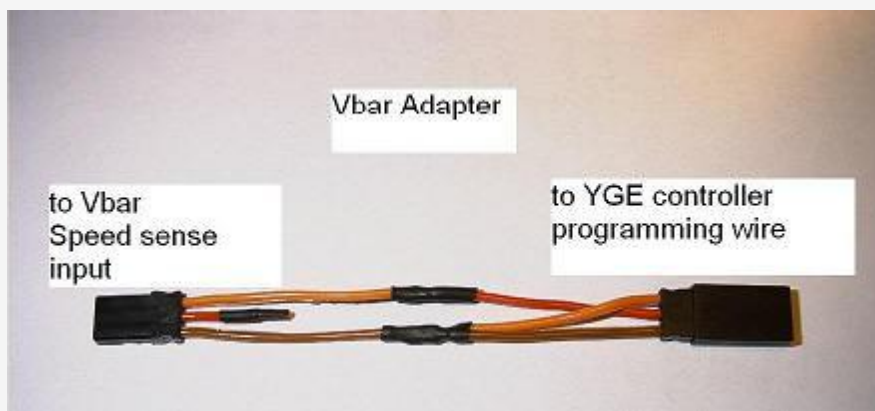
- i. **This controller offers the possibility of soft start-up then with a short response time.**
- ii. **Power on Tx, then VBar(Wait for Swash Bump), then Lipo to ESC**
- iii. Press **Enter Button on the ProgCard** (Controller Settings are read, and are now on Page 1 of the Program Card)
- iv. We will skip timing and brake as when we select Heli Middle it will reset it anyway
- v. **Select Cut off type = slow down and press Enter**
- vi. **Select Cut off Voltage =3.1V and press Enter**
- vii. **Select Cells=12 and press Enter**
- viii. **When calibrating ESC Endpoints with VBar you want the Gov enabled and press the button in Gov II Collective Control. Note the Long TX Cable from the ESC is disconnected, but be careful as motor can spool up if not done properly.**
- ix. **Tx Stick at 0 Throttle, select Special Functions Stop press Enter**

- x. **TX Stick at 100% Throttle select Special Functions Full press Enter**
- xi. On Program Card **Press Left 2 buttons simultaneously and hold for 2 sec.** (This switches to Page 2 of the Program Card, now left LED blinks for page 2)
- xii. Set **Startup Speed to Heli Middle** and confirm with **Enter**
- xiii. Select Act Freew/Gov Mode and **select Gov off and press Enter Three times.**
- xiv. Set Startup Speed to **Plane Fast** and confirm with **Enter.**
- xv. (For the controller here is another confirmation.)
- xvi. Verify Settings are correct for Page 2 by simply scrolling thorough
 - 1. Gov off, Startup Speed=Plane Middle, PWM=12kHz, Startup Power=Auto
- xvii. Set other OPTIONAL settings per your motor/preferences
 - 1. Timing = 12 deg(Xera 4530)
 - 2. PMW = 12KHz(Xera 4530)
- xviii. Calibrate VBar Govenor
 - 1. Turn on Collective Control
 - 2. Raise Motor On Slider – Note Value
 - 3. Now put that value -12 in Motor Off

5. **ESC Phase Sensor Output Wiring:**

- a. Vbar JST Female Connector
 - i. Just Brown wire(Ground) and Signal(Orange), Red(Power) not needed
- b. ESC JST Male Connector
 - i. Brown Wire to Brown Wire on Vbar(Ground<>Ground)
 - ii. Orange Wire to Brown Wire(Signal<>Ground)
 - iii. Red Wire to Orange on VBar(Phase Output <> Signal)

6.



Notes:

Test Flight One – Hover 5 Min

ESC Settings

Timing 18 deg
Slow Down – Lipo
Cut off 3.1V
Cells=12
Freewheel=On
Gov=off
Startup Heli Middle then Plane Middle
PMW=12KHz
Startup Power=2%
ESC=140 deg
Motor=150 deg

Test Flight Two

ESC Settings

Timing 6 deg
Startup Heli Middle then Plane Fast
Startup Power = Auto – No real difference between Auto
ESC=104 deg
Motor=120 deg