

**NOTE!!! TIPS ON CONNECTING YOUR RADIO GEAR AND SOME ADDITIONAL INFORMATION:**

**BOARD TOP VIEW**

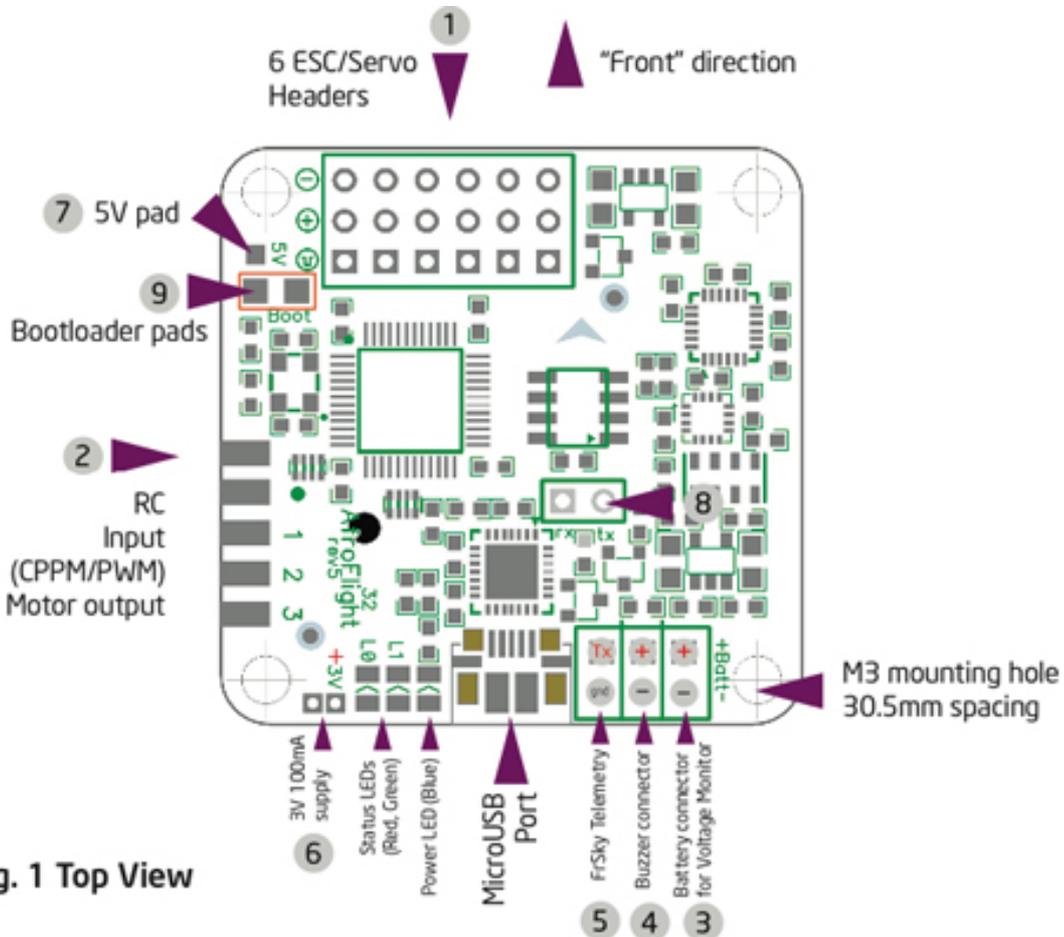
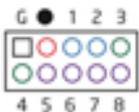


Fig. 1 Top View

**WARNING!!! ALL SETUP PROCEDURES SHOULD BE DONE WITHOUT PROPELLERS INSTALLED!!!**

**RECEIVER CONNECTIONS:**

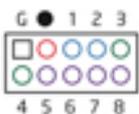


With the connector facing out, the pins are used as follows. Unmarked pin (left-most top side) is ground, pin marked with dot is 5V supply, the rest are RC signal pins for CPPM (channel 1) or channels 1 through 8. Standard female to female servo cable can be used to connect a CPPM receiver. Default channel order is AIL, ELE, THR, RUD, AUX1..AUX4. A breakout cable is provided for connection to standard receiver.

**STANDARD(PCM) RECEIVER:**

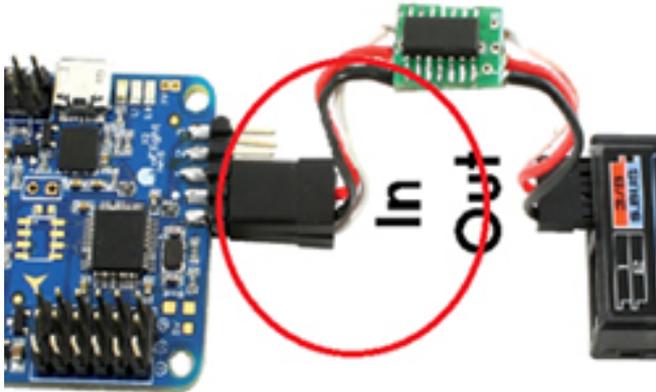
Connect AIL to 1, ELE to 2, THR to 5, RUD to 6, and AUX1/2 to channels 7 and 8.

**FUTABA SBUS RECEIVER**



Connect SIGNAL INVERTER (GROUND to G pin, +5v to pin marked «» and SIGNAL to pin 4(bottom row))

Connect output side of the cable to SBUS output terminal of your SBUS receiver



Connect flight controller to usb and run base flight software, from the configuration page of the app. choose SBUS serial receiver and click SAVE, go to RECEIVER page and change Channel map to FUTABA/HITEC, click SAVE

If using Futaba gear, center might be 1520. In that case, set MID THROTTLE(RC input middle point) value in CONFIG PAGE of base flight app to 1520, then subtrim to center all channels at 1520. Do not use trim in flight for either gyro or auto-level mode.

Check that all channels are moving accordingly in the channel graph of RECEIVER page in application.

### Spectrum Satellite Binding:

You may install prebound satellite to your model

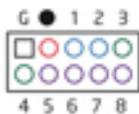
Bind it using a main receiver as usual

connect to the flight controller satellite extender wire connector

### Or you can bind it without main RX right on the Copter

- Make sure that satellite has been connected correctly.
- Connect Naze32 to USB (No need to connect your POWER BATTERY)
- Open baseflight software and connect to Naze32 (baseflight app in Chrome)
- From Configuration tab make sure that you have selected "Enable Serial-based receiver" and Serial receiver is correct (e.g. SPEKTRM2048 for DSMX)
- From CLI tab type: "set spektrum\_sat\_bind = 9" for DSMX or "set spektrum\_sat\_bind = 5" from DSM2
- type "save" and after Naze32 reboot remove USB cable (=Power off the Naze32)
- Wait a sec and reconnect the USB cable. After cold start satellite led should start blinking and transmitter should be turned on while pressing the bind button.
- After binding satellite led should be solid. Connect baseflight and use receiver tab to test that satellite is working correctly.
- Final step is to go to CLI tab and type "set spektrum\_sat\_bind = 0" and then type "save". This must be done so that satellite doesn't go back to binding mode when Naze32 is repowered again.

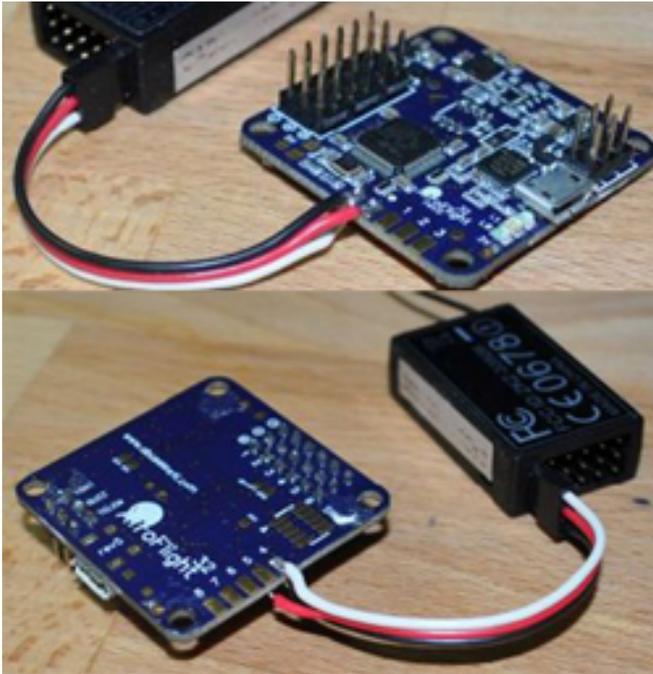
### Gaupner SUMD:



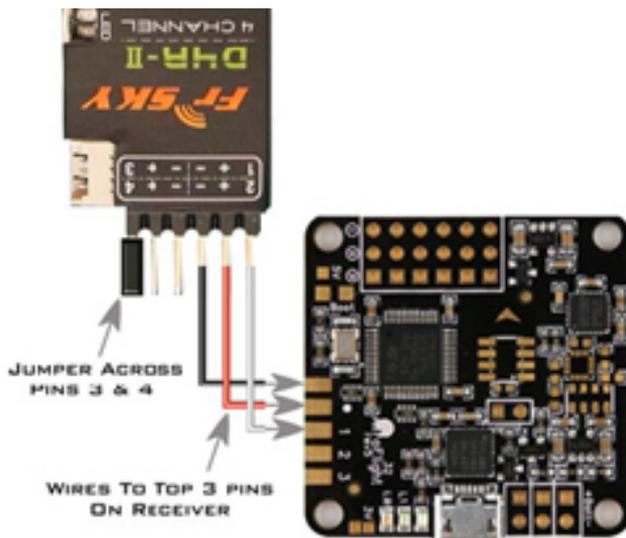
Simply connect SumD, wires ground to Gpin, power to +5v marked as «» and pin4 for signal(bottom row of pins).

Set the serial receiver to SUMD in Baseflight app configuration menu.

In a receiver tab of base flight app test that SUMD receiver is working correctly.



### CPPM(PPM) RECEIVER:



If you have a PPM receiver such as the Frsky D4R-II which allows the data of all channels to pulse on one signal cable reducing cabling. You can enable PPM in the Naze32 by entering the following in the CLI menu of baseflight app, type «feature ppm» press enter, then type «exit», go to receiver menu of the app, change channel mapping to default (AETR1234) save and check that all channels moving correspondently on the graph

### NOTE ABOUT «CHANNEL MAP» menu in app

Regarding AETR channel order etc, the easiest way to avoid cable mess would be to use «channel map» command to configure it to your receiver defaults.

**AETR** is the Futaba default,

JR/Spektrum are **TAER**, so if you wanted to do 1:1 connection (throttle -> 3 pin, then individual jumper wires in order for each channel) just do "map TAER1234" and you're done. Makes things easier.

Note the "1234" part is NOT the order of connection but assignment of AUX channels.

So if your radio (for example like 9X) puts knobs on aux 1/3 but you want switches there instead, you can swap the aux order with map, doing something like map AETR2413, which would make AUX1 in GUI run off aux2 switch on the radio. Just cosmetic stuff really, and only really matters when using PPM sum because otherwise you can just swap the jumper wires around going to the board.

**YOU CAN ADJUST YOUR RUDDER AND CYCLIC SPEED BY MAXIMIZING**

**YOUR YAW, AIL, AND ELEV ENDPOINTS IN YOUR TX AND ALO BY  
INCREASING YOUR AIL/ELEV AND YAW RATE IN PID PAGE OF BASEFLIGHT  
SOFTWARE**

**NAZE32 MANUAL:** [http://www.abusemark.com/downloads/naze32\\_rev3.pdf](http://www.abusemark.com/downloads/naze32_rev3.pdf)

**OTHER USEFUL LINKS:** [http://www.rcgroups.com/forums/showthread.php?  
t=1653753](http://www.rcgroups.com/forums/showthread.php?t=1653753)

[https://github.com/multiwii/baseflight/wiki/SerialRX--like-SpekSat,-Futaba-SBUS,-  
Graupner-SUMD](https://github.com/multiwii/baseflight/wiki/SerialRX--like-SpekSat,-Futaba-SBUS,-Graupner-SUMD)

**ALL OTHER ADDITIONAL INFORMATION AND MANUAL UPDATES YOU CAN  
FIND ON [WWW.AERIALFREAKS.COM](http://WWW.AERIALFREAKS.COM)**