Thank you for purchasing programming card for EMCS brushless motor electronic speed controller (ESC). With this device, you can easily set the programmable value of ESC. Now you can just forget the complicated and boring programming method with the throttle stick of your transmitter. This programming card has a friendly appearance and very easy to use. It is as small as a business card, so you can put it in your pocket when you are of field.

Parameter：

1. Cut Off Type: Protection type when battery voltage is lower than the setting threshold value.
2. Battery Type: Whether the battery is Li-xx or Ni-xx.
3. Cut Off Voltage: For Li-xx battery, Low/Middle/High cur off voltage of each cell are: "2.6V/2.85V/3.1V". For Ni-xx battery, Low/Middle/High cut off voltage of each cell are: 0%/45%/60% of the initial voltage when the model is power on. (0% means the cut off function is disabled).
4. Start Mode: Startup mode of ESC, default is VerySoft for helicopter.
5. Brake Mode: when OFF, the motor will stop gradually when throttle cut off, in other modes, motor will stop immediately when throttle cut off.
6. Timing Mode：Low means 20-30 degrees，Middle means 10-20 degrees，High means 0-10 degrees。
7. Current Cut Sensitivity: set the current sensitivity for over-current
8. Governed: reserved

Connection Sequence：

1. Disconnect the battery pack from ESC.
2. Disconnect the BEC cable of ESC (trio wires) from receiver, and then connect it to programming card
3. Connect the battery pack to ESC
4. LCD will display menu in 1-2 seconds, pressing buttons on the card can choose corresponding menu and value. (if LCD do not display or display abnormally, please check the direction of BEC wire, after confirmation, disconnect the power, wait for 1-2 seconds, then connect the power)
HINT: Please connect the BEC cable to programming card firstly, and then connect the power pack to ESC. Otherwise, the programming card cannot work properly.

Operation：

Buttons:
From left to right, the buttons are "Return", "Up", "Down", "Enter"
Press "Return" can go back to the up-lever menu.
Press "UP" / "Down" can flip the menu in the same lever.
Press "Enter" can select current menu or run corresponding function.

Menu：

"PC MODE" -----In PC mode, all the buttons are locked, no longer available
    "Waiting PC link" waiting for PC connect to the card

"PC Online" PC has connected to the card
    NOTE: In PC mode, if setting card need to change into programming mode, you should disconnect the power to ESC, and connect it 1-2 seconds later.
"PROGRAM" -----choose "Setting card" or "Programming card"
    NOTE: In programming mode, if card need to change into PC mode, you should disconnect the power to ESC, and connect it 1-2 seconds later.
    "1.R-ESC" read ESC parameter into setting card
        "Read ESC – OK-" read ESC parameter into setting card OK, then press "Return" to go back to up-lever menu(main menu), run "4.View" in main menu can see the parameter
    "2.W-ESC" write parameter into ESC
        "Writing ESC.." writing parameter into ESC
        "Write ESC-OK-" writing parameter into ESC successfully, press "Return" to go back to up-lever menu.
    "3.Setup" Set parameter
        "1.CutTy" --Cut Off Type
            "1.CutTy=Soft Cut"
            "1.CutTy=Cut Off"
        "2.BatTy" —Battery Type
            "2.Batty=Li-xx"
            "2.Batty=Ni-xx"
        "3.Cut V" —Cut Off Voltage
            "3.Cut V=Low" protection voltage for each Li-xx battery is 2.6V, disabled for Ni-xx
            "3.Cut V=Middle" protection voltage for each Li-xx battery is 2.85V, for each Ni-xx is 45% of the initial voltage when the model is power on.
            "3.Cut V=High" protection voltage for each Li-xx battery is 3.1V, for each Ni-xx is 60% of the initial voltage when the model is power on.
        "4.Start" —Start Mode
            "4.Start=Normal"
            "4.Start=Soft"
            "4.Start=VerySoft"
        "5.Break" —Break Mode
            "5.Break=Off"
            "5.Break=Low"
            "5.Break=Middle"
            "5.Break=High"
        "6.Tim." —Timing Mode
            "6.Tim.=Low" 20-30 degrees
            "6.Tim.=Middle" 10-20 degrees
            "6.Tim.=High" 0-10 degrees
        "7.C.C.S" —Current Cut Sensitivity
            "7.C.C.S=Highest"
            "7.C.C.S=High"

"7. C. C. S=Middle"
"7. C. C. S=Low"
"7. C. C. S=Off"
"8. Govern" ─Governor Mode, reserved
"8. Goven=Off"
"8. Goven=On"
Note: Press "Up" and "Down" to flip the items, press "Enter" to confirm, and press "Return" to cancel.
"4. View" ─Display parameter
"----" See "3. Setup" for means of each parameter.
Press "Return" to go back to up-lever menu.
"5. Defau" ─Load Default Value
"Load Def -OK-" Load default value OK, press "Return" to go back to up-lever menu.
"6. TestV" ─Test Battery Pack Voltage
"Testing Batt Vol" Testing battery voltage
"Batt Vol x.x V" Display battery pack voltage

Note: 1. Press "Up" and "Down" to flip the items
2. "Setup" and "Default" just save parameter in setting card, do not transmit them to ESC unless run "W-ESC"

Setting ESC via PC:

1. Disconnect the battery pack from ESC.
2. Disconnect the BEC cable of ESC (trio wires) from receiver, and then connect it to programming card
3. Connect the battery pack to ESC
4. Select "PC MODE" and press "Enter" to enter PC MODE
5. Connect programming card to PC via USB link
6. run PC software
7 PC will automatically connect to programming card and ESC, read ESC hardware type and version, then display on the software (if display abnormal, please click "Auto find hardware").
8. If connection is OK, PC software can read ESC parameter, set parameter and send to ESC, update hardware, and test motor rotating speed.
9. Close PC software before disconnect connection to PC, and disconnect the programming card from ESC, reset ESC and then run ESC

Load Default：

1, CutTy=Soft Cut
2, Batty=Li-xx
3, Cut V=Middle
4, Start=Normal

5, Break=Off
6, Tim. =Middle
7, C. C. S=Middle
8, Govern=Off