

MFC-2085

MULTI-FUNCTION FLIGHT CONTROLLER SYSTEM

ENGLISH MENU

INTRODUCTION &

QUICK ENTRANCE



Want to learn more about the product, video, pictures, and other matters of attention Please log in: www.hsdrc.com

Product Guarantee Condition

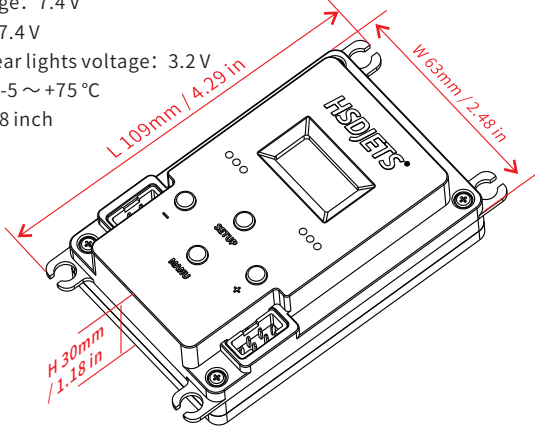
HSD Inc. during the production process each Multi-function Flight Controller System undergoes a series of test. We take the maintenance of the highest quality standards very seriously, and that is why we are able to grant a 12 month guarantee on all our Multi-function Flight Controller Products, valid from the initial date of purchase. The guarantee covers proven material faults, which will be corrected by us at no charge to you. We wish to emphasise expressly that we reserve the right to replace the unit if a repair is impossible for economic reasons. Proof of the commencement and progress of this guarantee period is the purchase receipt. Repairs which our Service Department carries out for you do not extend the guarantee period. Misuse and maltreatment, such as reversed polarity, excessive voltage and the effects of damp, invalidate the guarantee. The same applies to faults due to server wear or excessive vibration. The guarantee does not cover any additional claims, such as consequent damage. We expressly deny liability for damages which are caused by the device, or arise through the use of the device.

Product Features

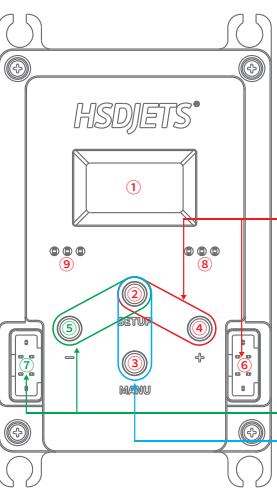
01. Two-way power management system 2S, 7.4 V input voltage design, single way 20A maximum electric current output, can meet the requirements of most aircraft in the today's market, and it has a function that the battery automatically seamless switches.
02. 0.96 inch OLED display screen, scroll menu preview internal settings. The main interface can display battery voltage value, power on time and other information.
03. The intelligent landing gear timing sequence system, can adjust the operating current of the landing gear and can set one key to retractable cover plate and landing gear.
04. Supporting electric brake control function and slow start brake, which make the aircraft taxiing more stable
05. With lighting control system, it can be turned on and off through the setting of remote control system programming, and five lighting flashing mode are arbitrarily called.
06. With the landing gear cover control system, it can extend or shorten the closing or opening time of the cover plate, it can also set the secondary action of the cover plate, and it can also adjust the servo stroke of the cover plate.
07. Can set the positive and negative reversals of the servo, includes ailerons, elevator, directions, flaps, and covers.
08. With the function of adjusting the neutral position of the servo, includes ailerons, elevator, directions and flaps.
09. The stroke of ailerons, elevator, directions and flaps can be adjusted by MFC-1085 multi-function flight controller.
10. With flight trajectory offset system. According to the characteristics of the aircraft, can set the elevator offset of the accelerator and flap to offset the curve and let it adjust arbitrarily.
11. Supporting tail lighting system, with the adjusted of the accelerator the lighting effect can be changed.
12. Supporting S-UBS bus(lines) functions, arbitrarily set 8 function channels, one signal line to complete the required functions.
13. The back line design. The line from the bottom of the installation position, the upper surface only two UBEC power input socket, no see other signal lines in surface, easy to install, simple and beautiful.
14. The output voltage of the receiver can be adjusted by programming. Two types of voltage choices can be used. The receiver and the steering gear can adjust the voltage range separately.
15. Simultaneously compatible with electric landing gear system and pneumatic landing gear system.

Product Specification

- * Working voltage : 7.4 V, 2S for DC. (battery input)
- * Receiver Output voltage: 6~7.4 V adjustable
- * Servo voltage: 6~7.4 V adjustable
- * Electric air valve voltage: 6 V
- * Electric landing gear voltage: 7.4 V
- * Electromagnetic Brake voltage: 7.4 V
- * Combustible lamp voltage: 7.4 V
- * Navigation lights/Landing gear lights voltage: 3.2 V
- * Working temperature range: -5 ~ +75 °C
- * Size : L 4.29 × W 2.48 × H 1.18 inch
- * Weight : 106 g / 3.74 oz



Panel and operation instructions



- ① OLED Display
- ② Enter key
- ③ Exit / One key retractable
- ④ Selection (down)
- ⑤ Selection (up)

Operation tips:

When the ⑥ interface connected to the battery: Press the ② and ④ combination button for 3 seconds at the same time to start up.

When the ⑦ interface connected to the battery: Press the ② and ⑤ combination button for 3 seconds at the same time to start up.

Note: the combination button is only applicable to the corresponding unilateral battery.

Long press the button ② and ③ for 3 seconds to shut down.

Long press the button ② for 3 seconds to enter the menu.

Long press the button ③ for 3 seconds to One key retractable.

Press the button ② exit one key retractable.

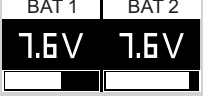
- ⑥ Battery input port (for 2S Li-Po only)
- ⑦ Battery input port (for 2S Li-Po only)
- ⑧ Electric indicator lamp
- ⑨ Electric indicator lamp

Manual Test	
Mode	Elec. LG: M1
Status	Ready

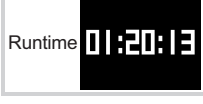
Manual Test	
Mode	Elec. LG: M1
Status	Gear Up

Manual Test	
Mode	Elec. LG: M1
Status	Gear Down

Screen instructions



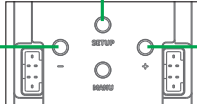
Dual battery voltage and quantity display



Press this button to display the system running time

Receiver	6.0V
AUX	6.0V
Nav.Light	7.4V
Throttle CP	OFF

Click this button will display:



The interface displays shortcut key

Flap CP	OFF
LG	Disable
Wh.Brake	Use Elec. Brake
Nav.Light	Always On

Click this button will display:

Note: The integrated control box has built-in program for avoiding mistake-taking. After each power-on, the landing gear retraction function is used for the first time. The gear switch of the control landing gear on the remote controller needs to be switched back and forth once to remove the program for avoiding mistake-taking.

Output & Input port Description

- L01: Afterburner light
- L02: Afterburner light
- L03: Navigation light
- L04: Navigation light
- L05: Navigation light
- L06: Navigation light
- L07: Navigation light
- L08: Navigation light
- L09: Navigation light
- L10: Navigation light
- L11: Navigation light
- L12: Navigation light
- L13: Landing gear light
- L14: Landing gear light
- L15: Landing gear light

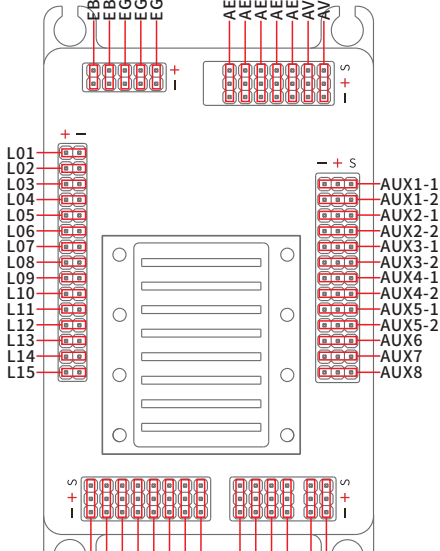
- EB-2: Electronics Brake 2
- EB-1: Electronics Brake 1
- EG-3: Electronics Landing gear 3
- EG-2: Electronics Landing gear 2
- EG-1: Electronics Landing gear 1
- AE-5: Gear Lock2 (Air+ Electronics)
- AE-4: Gear Lock 1 (Air+ Electronics)
- AE-3: Door 3 (Air+ Electronics)
- AE-2: Door 2 (Air+ Electronics)
- AE-1: Door 1 (Air+ Electronics)
- AV-2: Brake valve (Air)
- AV-1: Landing gear valve (Air)

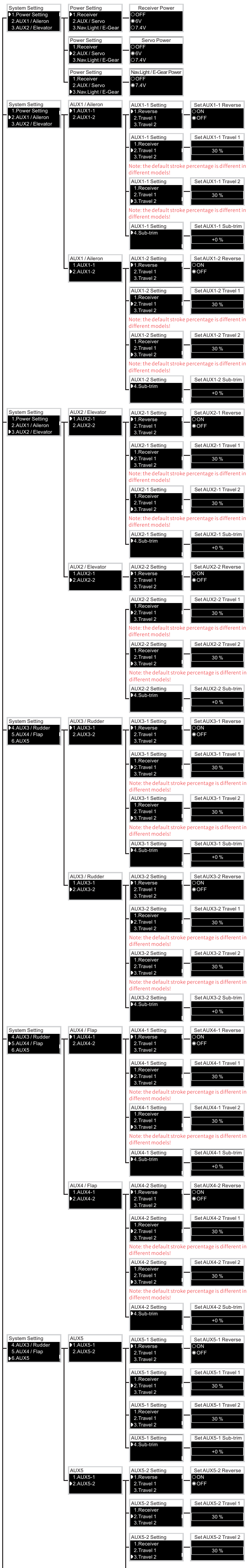
- AUX-1-1: Aileron
- AUX-1-2: Aileron
- AUX-2-1: Elevator
- AUX-2-2: Elevator
- AUX-3-1: Rudder
- AUX-3-2: Rudder
- AUX-4-1: Flap
- AUX-4-2: Flap
- AUX-5-1: Spare
- AUX-5-2: Spare
- AUX-6: Throttle
- AUX-7: Spare
- AUX-8: Spare

- R-01: S-BUS *
- R-02: S-BUS *
- R-03: Landing gear signal input
- R-04: Brake signal input
- R-05: Navigation light signal input
- R-06: Afterburner light signal input

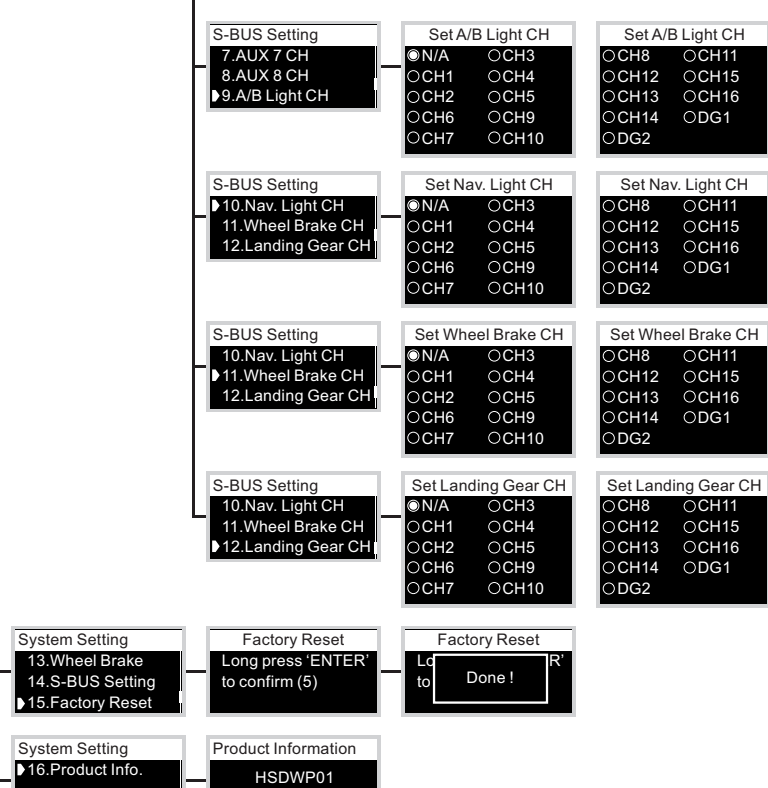
- R-07: AUX-1 Aileron Signal Input
- R-08: AUX-2 Elevator Signal Input
- R-09: AUX-3 Rudder Signal Input
- R-10: AUX-4 Flap Signal Input
- R-11: AUX-5 Spare Signal Input
- R-12: AUX-6 Throttle Signal Input
- R-13: AUX-7 Spare Signal Input
- R-14: AUX-8 Spare Signal Input

*R01 & R02 is S-Bus signal parallel interface

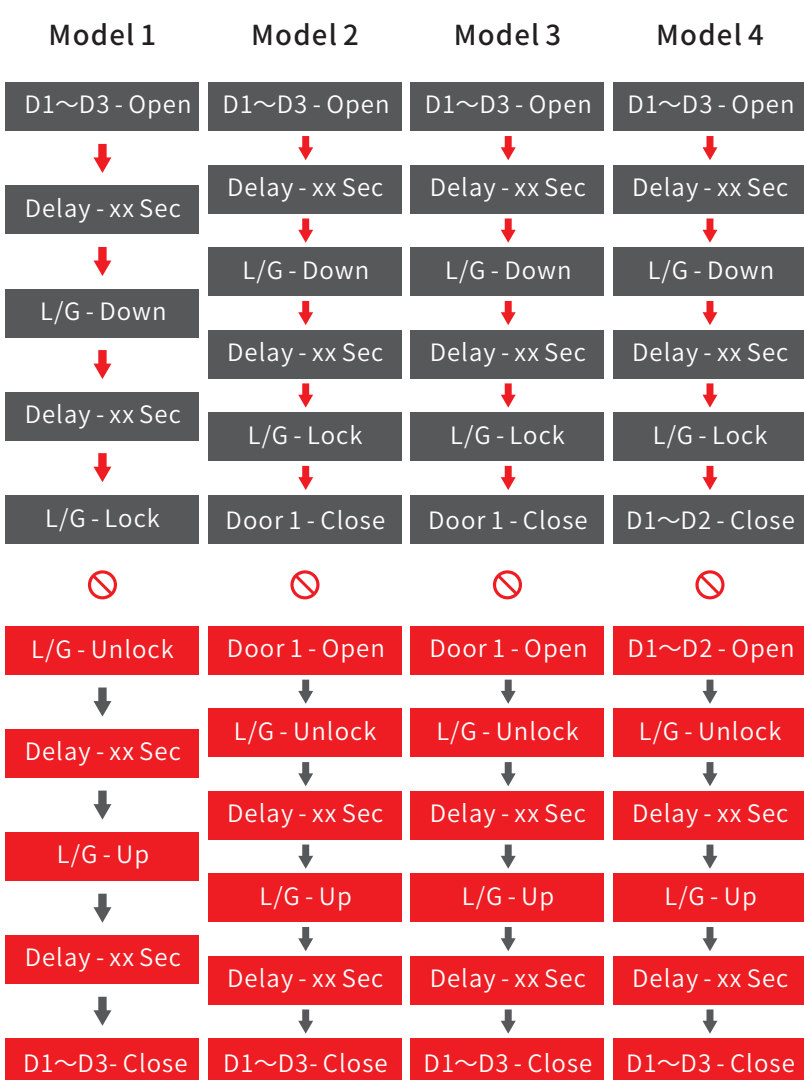




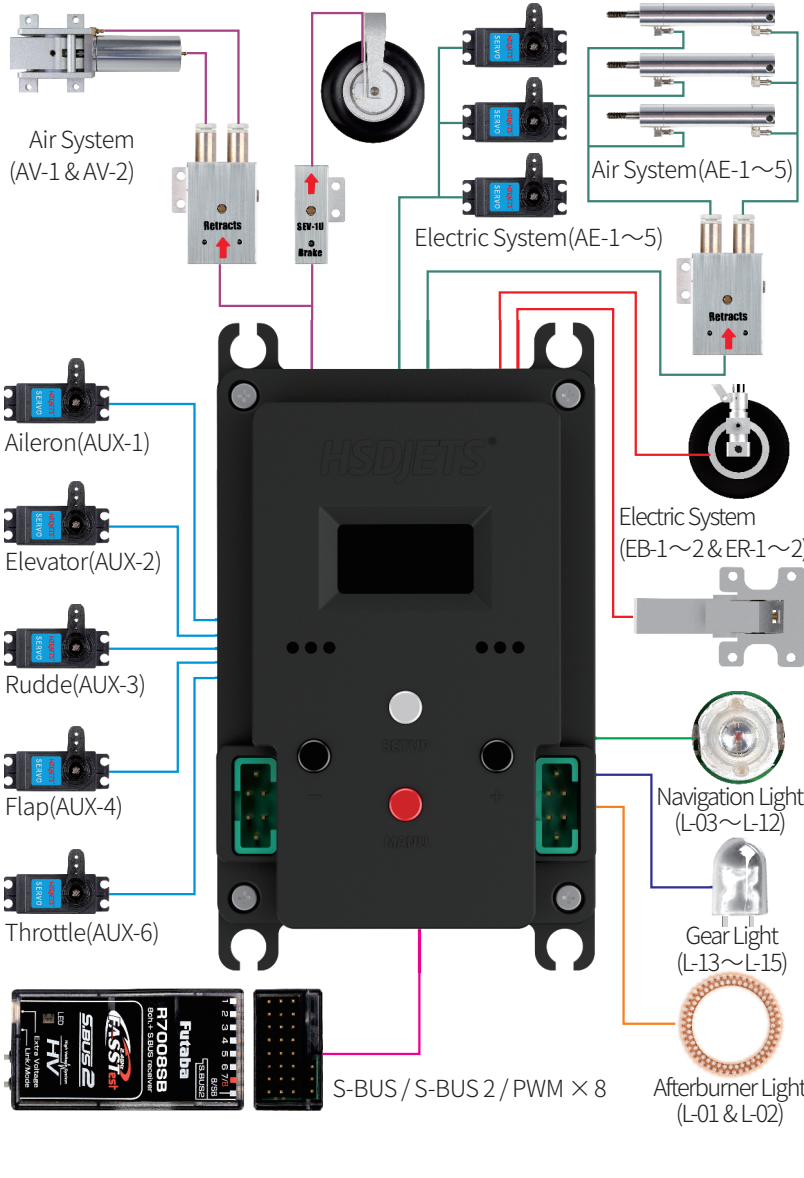
	AUX5-2 Setting ▶4.Sub-trim	Set AUX5-2 Sub-trim +0 %	
System Setting ▶7.Throttle CP ▶8.Flap CP ▶9.Elec.Landing Gear	Throttle CP ▶1.State 2.Start Point 3.AUX2 CP	Set Throttle CP State ○ON ●OFF	Special note: When this feature is turned on: *The throttle is needed to define as AUX6 *The elevator is needed to define as AUX2
	Throttle CP ▶2.Start Point 3.AUX2 CP	Set Start Point +10 %	
	Throttle CP 1.State 2.Start Point ▶3.AUX2 CP	Set AUX2 CP +0 %	
System Setting 7.Throttle CP ▶8.Flap CP ▶9.Elec.Landing Gear	Flap CP ▶1.State 2.AUX2 CP 3.CP Speed	Set Flap CP State ○ON ●OFF	Special note: When this feature is turned on: *The flap is needed to define as AUX4
	Flap CP 1.State ▶2.AUX2 CP 3.CP Speed	Set AUX2 CP +0 %	
	Flap CP 1.State 2.AUX2 CP ▶3.CP Speed	Set CP Speed 1	
System Setting 7.Throttle CP ▶8.Flap CP ▶9.Elec.Landing Gear	Elec.Landing Gear ▶1.Work Mode 2.Delay 3.Door 1	Set Elec.Gear Mode ○OFF ○M3 ○M1 ●M4 ○M2	
	Elec.Landing Gear 1.Work Mode ▶2.Delay 3.Door 1	Set Gear Delay 3.0(sec)	
	Elec.Landing Gear 1.Work Mode 2.Delay ▶3.Door 1	Gear Door ▶1.Reverse 2.Travel angle	Set Door 1 Reverse ●ON ○OFF
		Gear Door 1.Reverse ▶2.Travel angle	Set Door 1 Travel 90(degree)
	Elec.Landing Gear ▶4.Door 2 5.Door 3 6.Door speed	Gear Door ▶1.Reverse 2.Travel angle	Set Door 2 Reverse ●ON ○OFF
		Gear Door 1.Reverse ▶2.Travel angle	Set Door 2 Travel 90(degree)
	Elec.Landing Gear 4.Door 2 ▶5.Door 3 6.Door speed	Gear Door ▶1.Reverse 2.Travel angle	Set Door 3 Reverse ●ON ○OFF
		Gear Door 1.Reverse ▶2.Travel angle	Set Door 3 Travel 90(degree)
	Elec.Landing Gear 4.Door 2 5.Door 3 ▶6.Door speed	Set Door Speed 10	
	Elec.Landing Gear ▶7.Gear Lock 8.Gear Current 1 9.Gear Current 2	Set Gear Lock ○ON ●OFF	
	Elec.Landing Gear 7.Gear Lock ▶8.Gear Current 1 9.Gear Current 2	Set Gear Current 1 500(mA)	
	Elec.Landing Gear 7.Gear Lock 8.Gear Current 1 ▶9.Gear Current 2	Set Gear Current 2 500(mA)	
	Elec.Landing Gear ▶10.Gear Current 3	Set Gear Current 3 500(mA)	
System Setting ▶10.Air Landing Gear 11.Navigation Light 12.Afterburner Light	Air Landing Gear ▶1.Work Mode 2.Delay 3.Gear Lock	Set Air Gear Mode ●OFF ○M3 ○M1 ○M2	
	Air Landing Gear 1.Work Mode ▶2.Delay 3.Gear Lock	Set Gear Delay 3.0(sec)	
	Air Landing Gear 1.Work Mode 2.Delay ▶3.Gear Lock	Gear Lock ○ON ●OFF	
System Setting 10.Air Landing Gear ▶11.Navigation Light 12.Afterburner Light	Light Setting ▶1.Work Mode 2.Light CH 1 3.Light CH 2	Set Nav. Light Mode ●Always On ○User Control	Note: A radio transmitter channel can be set to control the turn on or off.
	Light Setting 1.Work Mode ▶2.Light CH 1 3.Light CH 2	Set Light CH 1 Mode ○S1 ○S4 ●S2 ○S5 ○S3	
	Light Setting 1.Work Mode 2.Light CH 1 ▶3.Light CH 2	Set Light CH 2 Mode ○S1 ○S4 ●S2 ○S5 ○S3	
	Light Setting ▶4.Light CH 3 5.Light CH 4 6.Light CH 5	Set Light CH 3 Mode ○S1 ○S4 ●S2 ○S5 ○S3	
	Light Setting 4.Light CH 3 ▶5.Light CH 4 6.Light CH 5	Set Light CH 4 Mode ○S1 ○S4 ●S2 ○S5 ○S3	
	Light Setting 4.Light CH 3 5.Light CH 4 ▶6.Light CH 5	Set Light CH 5 Mode ○S1 ○S4 ●S2 ○S5 ○S3	
System Setting 10.Air Landing Gear 11.Navigation Light ▶12.Afterburner Light	Set Afterburner Light ●ON ○OFF		
System Setting ▶13.Wheel Brake ▶14.S-BUS Setting 15.Factory Reset	Wheel Brake Setting ▶1.Brake Selection 2.Wheel Air Brake 3.Wheel Elec. Brake	Set Brake Selection ●Air Brake ○Elec. Brake	
	Wheel Brake Setting 1.Brake Selection ▶2.Wheel Air Brake 3.Wheel Elec. Brake	Set Air Brake Mode ●Normal ○Pulse	
	Wheel Brake Setting 1.Brake Selection 2.Wheel Air Brake ▶3.Wheel Elec. Brake	Elec. Wheel Brake ▶1.L-Wheel Strength 2.R-Wheel Strength 3.Gradual Time	L-Wheel Strength 100%
		Elec. Wheel Brake 1.L-Wheel Strength ▶2.R-Wheel Strength 3.Gradual Time	R-Wheel Strength 100%
		Elec. Wheel Brake 1.L-Wheel Strength 2.R-Wheel Strength ▶3.Gradual Time	Set Gradual Time 0(sec)
		Elec. Wheel Brake ▶4.Gradual Start Point	Gradual Start Point 20%
System Setting 13.Wheel Brake ▶14.S-BUS Setting 15.Factory Reset	S-BUS Setting ▶1.AUX 1 CH 2.AUX 2 CH 3.AUX 3 CH	Set AUX 1 CH ●N/A ○CH3 ○CH1 ○CH4 ○CH2 ○CH5 ○CH6 ○CH9 ○CH7 ○CH10	Set AUX 1 CH ○CH8 ○CH11 ○CH12 ○CH15 ○CH13 ○CH16 ○CH14 ○DG1 ○DG2
	S-BUS Setting 1.AUX 1 CH ▶2.AUX 2 CH 3.AUX 3 CH	Set AUX 2 CH ●N/A ○CH3 ○CH1 ○CH4 ○CH2 ○CH5 ○CH6 ○CH9 ○CH7 ○CH10	Set AUX 2 CH ○CH8 ○CH11 ○CH12 ○CH15 ○CH13 ○CH16 ○CH14 ○DG1 ○DG2
	S-BUS Setting 1.AUX 1 CH 2.AUX 2 CH ▶3.AUX 3 CH	Set AUX 3 CH ●N/A ○CH3 ○CH1 ○CH4 ○CH2 ○CH5 ○CH6 ○CH9 ○CH7 ○CH10	Set AUX 3 CH ○CH8 ○CH11 ○CH12 ○CH15 ○CH13 ○CH16 ○CH14 ○DG1 ○DG2
	S-BUS Setting ▶4.AUX 4 CH 5.AUX 5 CH 6.AUX 6 CH	Set AUX 4 CH ●N/A ○CH3 ○CH1 ○CH4 ○CH2 ○CH5 ○CH6 ○CH9 ○CH7 ○CH10	Set AUX 4 CH ○CH8 ○CH11 ○CH12 ○CH15 ○CH13 ○CH16 ○CH14 ○DG1 ○DG2
	S-BUS Setting 4.AUX 4 CH ▶5.AUX 5 CH 6.AUX 6 CH	Set AUX 5 CH ●N/A ○CH3 ○CH1 ○CH4 ○CH2 ○CH5 ○CH6 ○CH9 ○CH7 ○CH10	Set AUX 5 CH ○CH8 ○CH11 ○CH12 ○CH15 ○CH13 ○CH16 ○CH14 ○DG1 ○DG2
	S-BUS Setting 4.AUX 4 CH 5.AUX 5 CH ▶6.AUX 6 CH	Set AUX 6 CH ●N/A ○CH3 ○CH1 ○CH4 ○CH2 ○CH5 ○CH6 ○CH9 ○CH7 ○CH10	Set AUX 6 CH ○CH8 ○CH11 ○CH12 ○CH15 ○CH13 ○CH16 ○CH14 ○DG1 ○DG2
	S-BUS Setting ▶7.AUX 7 CH 8.AUX 8 CH 9.A/B Light CH	Set AUX 7 CH ●N/A ○CH3 ○CH1 ○CH4 ○CH2 ○CH5 ○CH6 ○CH9 ○CH7 ○CH10	Set AUX 7 CH ○CH8 ○CH11 ○CH12 ○CH15 ○CH13 ○CH16 ○CH14 ○DG1 ○DG2
	S-BUS Setting 7.AUX 7 CH ▶8.AUX 8 CH 9.A/B Light CH	Set AUX 8 CH ●N/A ○CH3 ○CH1 ○CH4 ○CH2 ○CH5 ○CH6 ○CH9 ○CH7 ○CH10	Set AUX 8 CH ○CH8 ○CH11 ○CH12 ○CH15 ○CH13 ○CH16 ○CH14 ○DG1 ○DG2



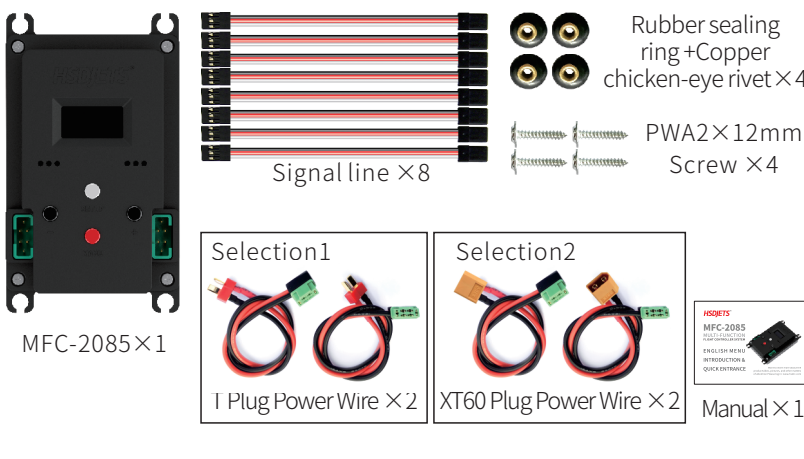
Sequential action description



Installation Diagram



Packing list



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