



ENJET® Turbojet Engine

G3 Series User Manual

2026.7





catalogue

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summary

Welcome to the Enjet model aircraft turbojet engine. This manual is specifically designed for the G3 series turbojet engines manufactured by Guangxi Nanning Yingjiete UAV Co., Ltd. Before using the Enjet engine, please carefully review the following content to gain a comprehensive understanding of its components and operational procedures, learn about key specifications, and understand proper installation, operation, and maintenance methods. Strict adherence to these instructions is essential for safe operation.

If you have any further questions, please contact your Enjet agent or Enjet customer service.

disclaimer

Guangxi Nanning Yingjiete UAV Co., Ltd. makes no warranties whatsoever regarding the contents of this manual, including but not limited to implied warranties of merchantability and fitness for purpose.

The Company shall not be liable for any indirect or incidental damages arising from errors in the information contained herein or from the provision, use, or implementation of this manual.

As our company cannot monitor whether users install and use the engine correctly as required, we shall not be liable for any property losses, personal injuries, or other damages resulting from improper operation.

Users must thoroughly read and understand this manual, fully comprehend the product's functions, and be aware of potential risks during operation. Enjet makes no warranties regarding the product's performance or functionality; users should make purchasing decisions and operate the device based on their professional judgment.

When flying with an ENJET turboprop engine, always choose a legal and safe flight location.

Users must fully recognize the potential unexpected risks associated with turbojet engines during flight and assume full responsibility for any consequences arising therefrom.

Before each flight, it is recommended to conduct ground simulation tests to eliminate potential faults as much as possible.



However, since turbojet engines and their associated structures constitute complex operational systems, ENJET cannot accurately identify all potential causes of failure. Therefore, unless attributable to inherent manufacturing defects of the product, ENJET shall not be liable for any direct or indirect losses arising from its use.

Please note: The ENJET turboprop engine is intended solely for model aircraft use and must not be used in any other applications.



safety instruction

A turbojet engine is a sophisticated system that typically operates under high rotational speeds and elevated temperatures, posing certain safety risks; it is imperative to fully recognize these hazards.

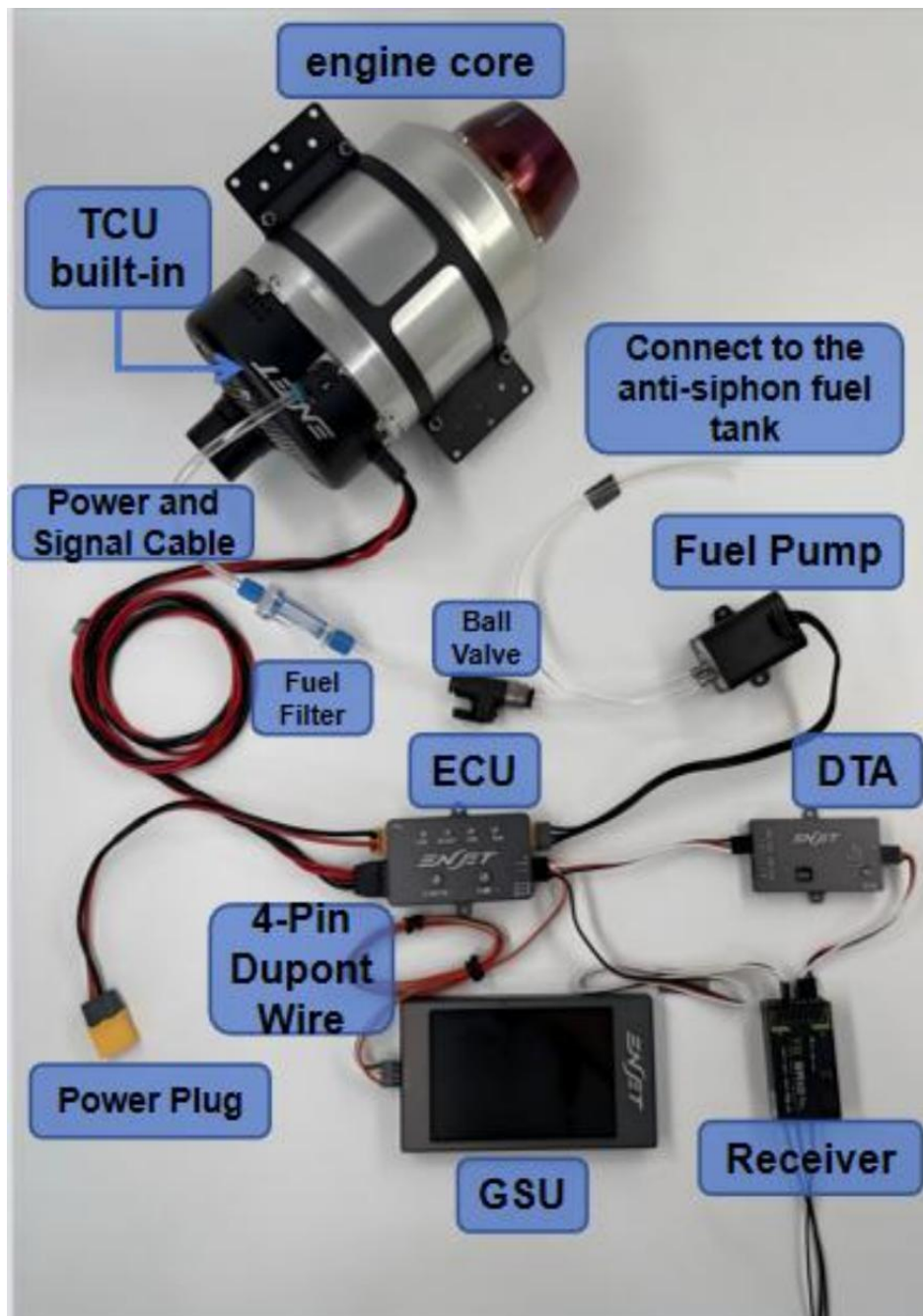
1. Not to be used in prohibited flight areas.
2. Operation is prohibited in flammable, explosive, or fire-prone areas.
3. Do not run in silent mode.
4. Do not disassemble or replace engine components without authorization. ENJET reserves the right to refuse subsequent maintenance services if unauthorized operations are performed.
5. Only carbon dioxide fire extinguishers may be used for firefighting; the use of other types of extinguishers, such as dry powder extinguishers, is strictly prohibited.
6. During engine operation, personnel must stay away from the engine and enter a safe area.
7. Jet propulsion engines generate significant noise during operation, which may potentially damage hearing; therefore, appropriate hearing protection equipment must be worn.
8. Due to the extremely high rotational speeds of turbojet engines during operation, dynamic imbalance or other malfunctions may cause solid debris to be ejected at high velocity.
9. Additionally, high-pressure, high-temperature gas streams are ejected from the rear of the engine, posing significant risks of severe burns or impact injuries. Therefore, no personnel are permitted to approach the engine's rear, particularly within the fan-shaped restricted zone spanning a 10-meter radius and 180 degrees around the rear.
10. Do not touch an engine that is running or not fully cooled to avoid severe burns.
11. Do not use fuel stored for extended periods in plastic tanks, as it may degrade and impair engine performance.
12. All fuels used must be blended with the appropriate amount of specialized lubricant to ensure proper engine lubrication and cooling.

Engine Components and Connections

	
Engine body	DTA Telemetry Return Module (Data Transfer Adapter) Wt: 17 g
	
ECU Controller (Pump Control Unit) Wt: 48g	GSU Ground Support Unit (Ground Support Unit) Wt: 95g
	
Oil pump	Engine power communication line (E86, E100 0.8m, Wt: 34g/E130, E170 1.2m, Wt: 48g)
	
Oil filter (Wt: 4 g)	Ball valve (Wt: 12 g)
	
Fuel line (200 mm), Wt: 9 g/m	Oil pump line (20 cm, Wt: 7 g)
	
3-pin Dupont wire (20 cm, Wt: 3 g)	4-pin Dupont wire (60 cm, Wt: 7 g)
	
Power adapter cable (30 cm, Wt: 15 g)	



Please install the above components correctly according to the connection diagram provided in the accompanying manual to ensure the safety of the engine system.





Engine Specification Table

engine type	E86	E100	E130	E170
Diameter (mm)	90mm	90mm	90	109mm
overall length (mm)	205mm	205mm	185	245mm
Body weight (g)	950g	950g	950g	1500g
PCU weight (g)	48	48	48	48
Oil pump weight (g)	64	64	64	64
Speed Range (1/min)	42000-152000	42000-154000	42000-150000	33000-125000
Idling Thrust (N)	3.5	4	5	6
Maximum rotational speed thrust (N)	86N	102N	125N	170N
delivery temperature (°C)	600-750	600-750	600-750	600-850
Maximum Fuel Consumption (ml/min)	320	340	420	520
Use Fuel	Aviation kerosene/High-quality diesel	Aviation kerosene/High-quality diesel	Aviation kerosene/High-quality diesel	Aviation kerosene/High-quality diesel
Lubricating oil ratio	3–5% recommended; 4%	3–5% recommended; 4%	3–5% recommended; 4%	3–5% recommended; 4%
source	3S LIPO(≥ 2200mah)	3S LIPO(≥ 2200mah)	3S LIPO(≥ 2200mah)	3S LIPO(≥ 2200mah)
Parameter Adjustment Method	Mobile App/Setting Card	Mobile App/Setting Card	Mobile App/Setting Card	Mobile App/Setting Card
Data Backhaul (External Backhaul Module)	FUTABA/JETI/Frsky/spektrum	FUTABA/JETI/Frsky/spektrum	FUTABA/JETI/Frsky/spektrum	FUTABA/JETI/Frsky/spektrum
maintenance period	Every 25 hours	Every 25 hours	Every 25 hours	Every 25 hours
All data were measured under standard conditions (STP) $\pm 3\%$, with STP defined as 15°C and 101.3 kPa.				



First Run

1. Download the ENJET software or use the GSU Ground Configurator to set parameters. iOS users can search for ENJET in the App Store to download and install it. The Android app installation package is currently provided by the manufacturer or distributor.

2. Ensure proper connections between electrical components and the fuel system, and that engine installation complies with all specifications.

3. Use a 3S LiPo battery with a capacity of no less than 2200 mAh as the power source.

4. Calibrate the remote control's throttle travel using the throttle calibration feature in the App or GSU (see App/GSU Function Guide for details).

5. Drain air from the oil pipe and oil filter to ensure the fuel system is fully filled with oil.

6. Follow these steps: Remove the engine fuel inlet pipe, hold down the "PUMP" button on the ECU controller, or use the "Test Fuel Pump" function in the App/GSU to supply fuel to the pipe outlet. Once fuel reaches the outlet, reconnect the pipe to the engine fuel inlet.

7. Prepare a CO2 fire extinguisher; the use of dry powder fire extinguishers is prohibited.

8. The basic operation procedure for remote control is as follows: Start: Set the throttle to maximum, hold it there for 1–5 seconds, then return to minimum to initiate startup; the engine will start automatically and continue running until operational. The engine speed can only be controlled using the throttle lever after it has entered operational mode. Stop: To shut down the engine during startup or operation, pull the throttle lever to minimum and set it to minimum position to stop the engine.



Engine Parameter Settings

1. Idling: The idle setting automatically locks an adjustable range based on the engine model. When sea level exceeds 500 meters or ambient temperature exceeds 25°C, it is recommended to increase the idle speed appropriately for more stable operation.

2. Full Speed: The full-speed setting automatically locks the adjustable range according to different engine models; reducing it decreases the engine's thrust output.

3. Starting fuel quantity: When diesel can be used for normal starting, the starting fuel quantity is generally set to "0". If fuel is insufficient during startup or the engine flame is weak, the starting fuel quantity may be appropriately increased; this will shorten the startup time. For aviation kerosene, it is recommended to increase the starting fuel quantity by 10–20%. The optimal increase ensures proper startup without flame emission.

4. Fuel consumption correction: When used with the data transmission module (DTA), this feature accounts for variations in engine oil pump efficiency across different operating conditions by compensating based on the ratio between actual fuel consumption and the engine's displayed consumption reading; repeated calibration enables highly accurate results.

5. Response Mode: Select an appropriate response mode based on the operating environment and fuel type, testing in ascending order from slow to fast. During sudden acceleration or deceleration, the engine should not stall and no noticeable exhaust flame should be observed. In areas above 1,000 meters in altitude, it is recommended to use "Standard Mode" or a slower response mode. When using a faster response mode at high altitudes or in hot environments, appropriately increase the engine idle speed.

6. Selection of Ultra-Fast Mode: When using Ultra-Fast Mode, the atmospheric pressure must be ≥ 99.5 kPa, the ambient temperature must be below 25 °C, and aviation kerosene fuel must be used. An increased fuel supply rate from the oil pump may compromise engine stability and, in severe cases, pose fire risks. Use this mode only as appropriate based on environmental conditions!

7. Engine Stalling and Restart: The most common cause of engine stalling during



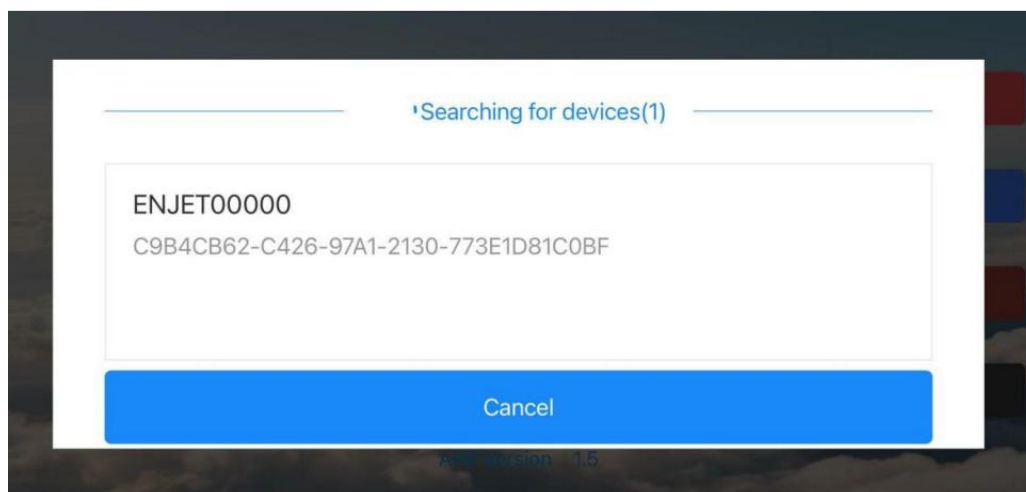
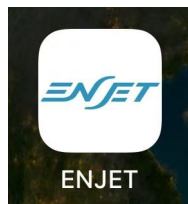
operation is air entering the fuel system, which can also occur when response settings are set too quickly during acceleration or deceleration. Excessive air in the fuel system reduces the success rate of engine restart; the restart process requires more power than a normal start-up procedure. Insufficient battery capacity or low voltage further decreases the likelihood of successful restart. This function does not guarantee safe engine restarts every time and may even increase fire risks. It has certain limitations and should be used with caution.



ENJET APP Operation Instructions

1. Start Running

1. Open the app and launch it
2. Select App Language
3. Upon entering the "Connect" app, it will automatically search for available engines and display their numbers; click to select the engine you wish to connect.
4. Go to the main menu





Enter the main interface



II. Accelerator Calibration

1. Enter the throttle calibration interface
2. Select the appropriate calibration option, follow the prompts to set both the remote control throttle lever and fine adjustment to the desired positions, then click the "Calibrate" button to complete the calibration.
3. The value marked as "Calibrated" matches the displayed remote control value, indicating successful calibration (a deviation within ± 3 is considered normal).

Radio Value 993

Stop (Stick Down, Trim Down) Calibrated: 990

Idle (Stick Down, Trim Up) Calibrated: 1121

MaxSpeed (Stick Up, Trim Up) Calibrated: 2009

Calibrate

Restore Default

Back



3. Parameter Settings

Summary box:

- Idle: 45000
- MaxSpeed: 153000
- StartFuel: 0
- QsmCorr: 100
- SpeedMode: Auto
- ReStart: ON

Sliders:

- Idle: 45000
- MaxSpeed: 153000
- StartFuel: 0
- QsmCorr: 100

SpeedMode: SuperFast, Fast, Normal, Slow, VerySlow, Auto

ReStart: OFF, ON

Buttons: Modify, Back

1. Idling speed: Set the engine's idle speed. A higher idle speed improves acceleration response at low speeds; therefore, aim for a slightly higher value as long as the aircraft can stop safely.

2. Full speed: Sets the maximum engine RPM. Reduce this speed to lower the engine's maximum thrust output.

3. Starting fuel quantity: Sets the initial power compensation for the fuel pump during engine startup, appropriately increasing the fuel supply when starting is difficult (due to insufficient fuel).

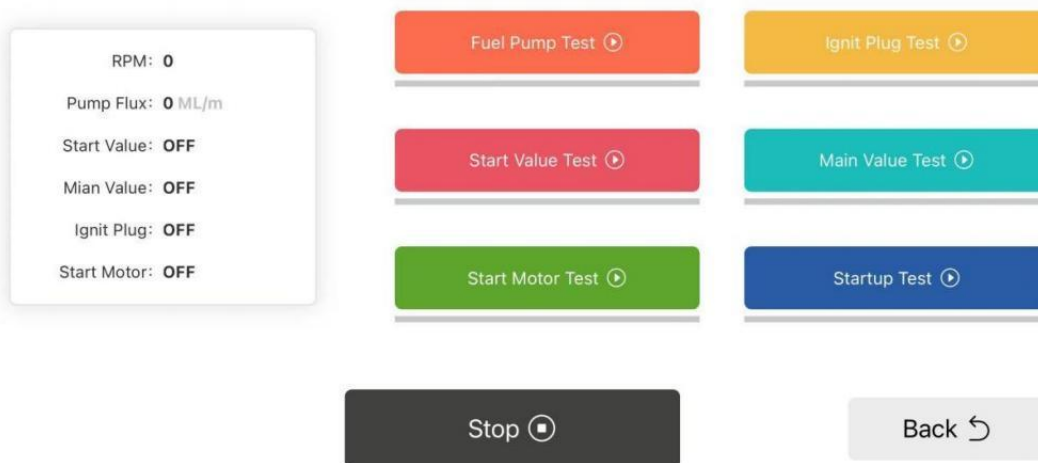
4. Fuel consumption correction: Corrects the error in fuel pump flow display. Due to variations in pipeline resistance and fuel quality, adjustments are made to the fuel pump flow reading to obtain a more accurate fuel consumption measurement. If the actual consumption differs from the displayed value by a certain percentage, the percentage value is adjusted accordingly.

5. Response Modes: Five preset response modes and an automatic mode are available. Select the appropriate mode based on operating conditions; in environments with high temperatures or elevations, use the slower response mode for stable engine performance. The automatic mode suits most scenarios, automatically adjusting engine response according to atmospheric pressure sensor data.

6. Engine shutdown and restart: Enable or disable the engine shutdown and restart function. Users should understand the risks associated with this feature based on their professional knowledge before enabling it.



IV. Component Testing



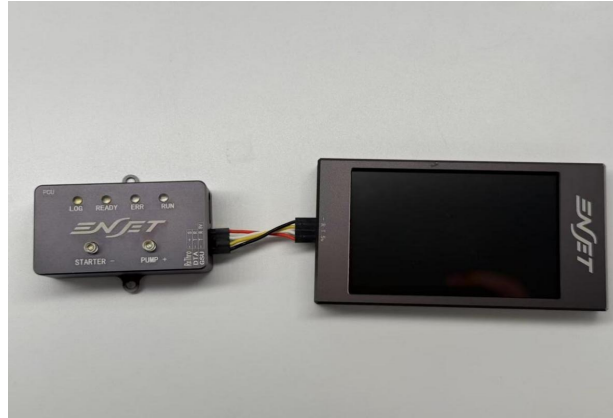
The engine's components can be tested in idle state.

1. Oil Pump Test: The oil pump will gradually accelerate while simultaneously activating the Main Oil Valve Test, which opens the main oil valve.
2. Start valve test: Open the start solenoid valve to activate the oil circuit.
3. khởi động máy: The starter is activated and drives the rotor to rotate.
4. Firehead Test: Ignition head lighting test.
5. Main oil valve test: The main oil circuit solenoid valve opens, allowing the main oil circuit to flow.
6. Start test: The engine starts automatically and runs at idle.
7. When the test button is active, the return button cannot stop the test; you must click the test button again to make it pop up and stop the test, or click the "Stop" button to halt all tests.



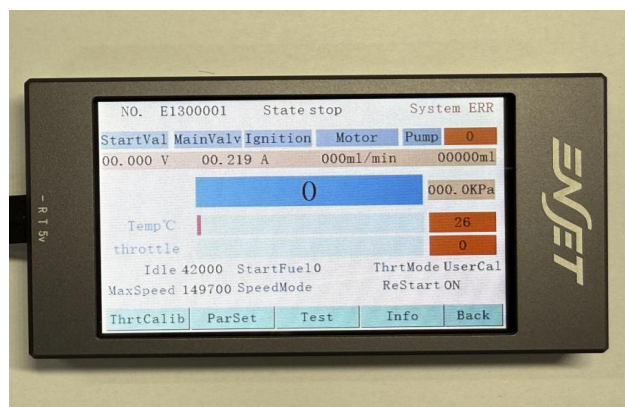
GSU Ground Controller Operation Instructions

Connection to the ECU



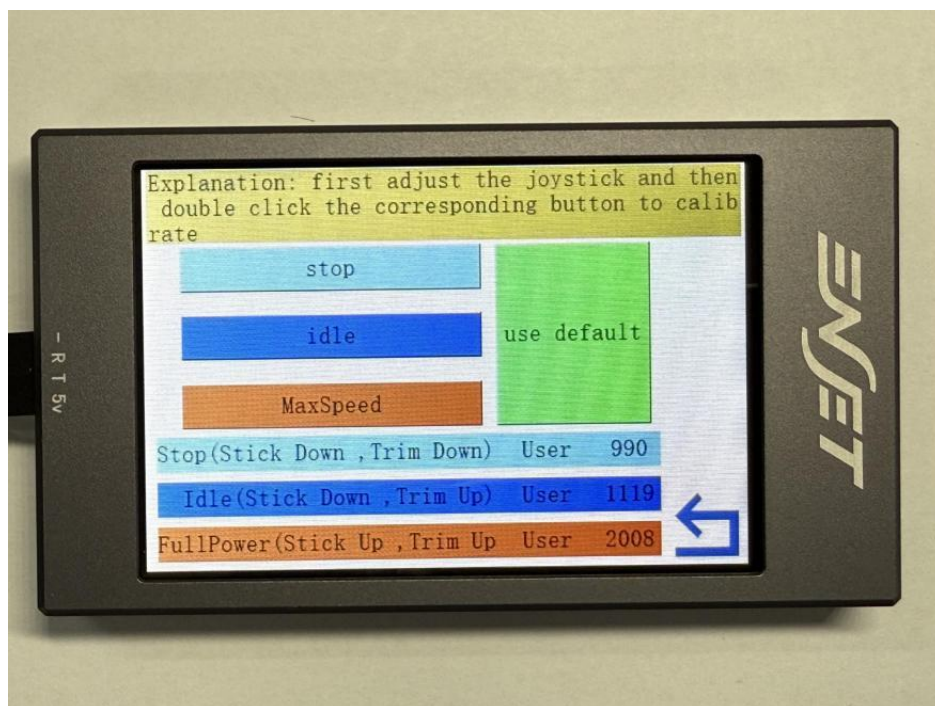
1. The GSU is a terminal for displaying and editing engine parameters, which can be connected to or disconnected from the engine at any time.

2. The GUS is connected to the engine via the ECU using a 4P DuPont cable, with pin assignments defined as-RT5V. Carefully identify the negative terminal (-) and positive terminal (5V) on the cable; correct wiring ensures screen illumination. The letters R represent the data receiving terminal and T represent the data transmitting terminal. When connecting to the ECU, GSU's R corresponds to the ECU's T, and GSU's T corresponds to the ECU's R — meaning sending signals to the receiving terminal and receiving signals from the sending terminal. The engine number displayed in the upper-left corner of the screen confirms successful connection. If the data cable wiring is incorrect or there is a circuit break, the screen will display "Connection interrupted..." in the upper-left corner.



Throttle Calibration

1. Enter the throttle calibration interface
2. Select the appropriate calibration option, follow the prompts to set both the remote control throttle lever and fine adjustment to the desired positions, then double-click the "Calibrate" button to complete the calibration.
3. Calibration should be performed sequentially in the order of "stop", "idling", and "full speed".



parameter setting

1. Idling speed: Set the engine idle speed; a higher idle speed improves acceleration response at low speeds. When ensuring the aircraft can stop safely, set the idle speed as high as possible.
2. Full Speed: Set the engine's maximum RPM; reduce it to lower the maximum

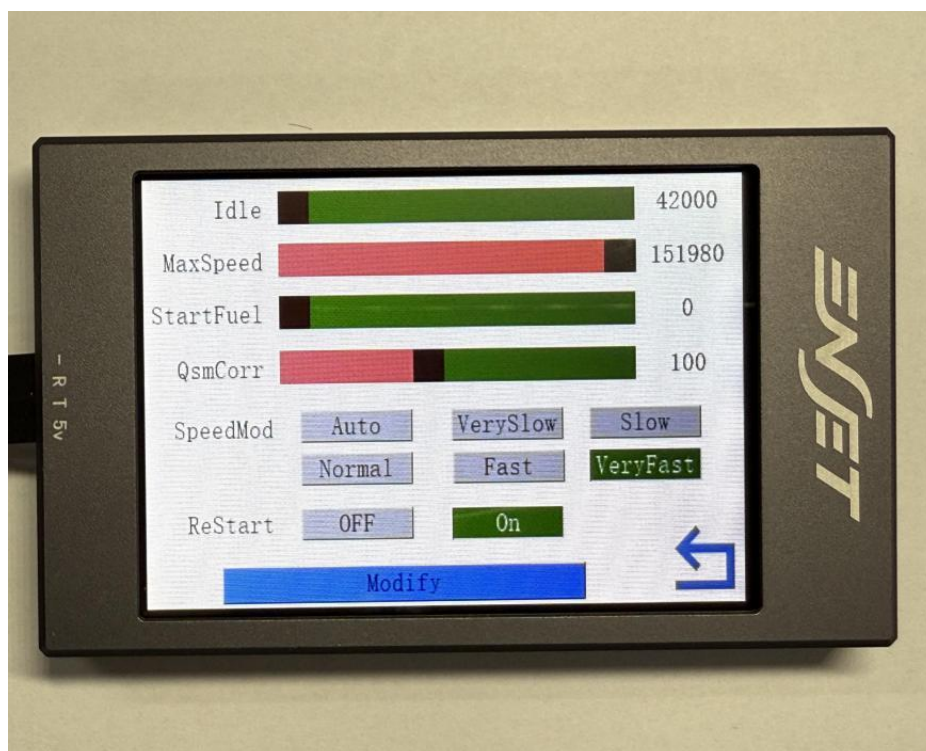
thrust output.

3. Starting Fuel Amount: Set the fuel pump's initial power compensation during engine startup, and appropriately increase the starting fuel amount when startup is difficult (due to insufficient fuel).

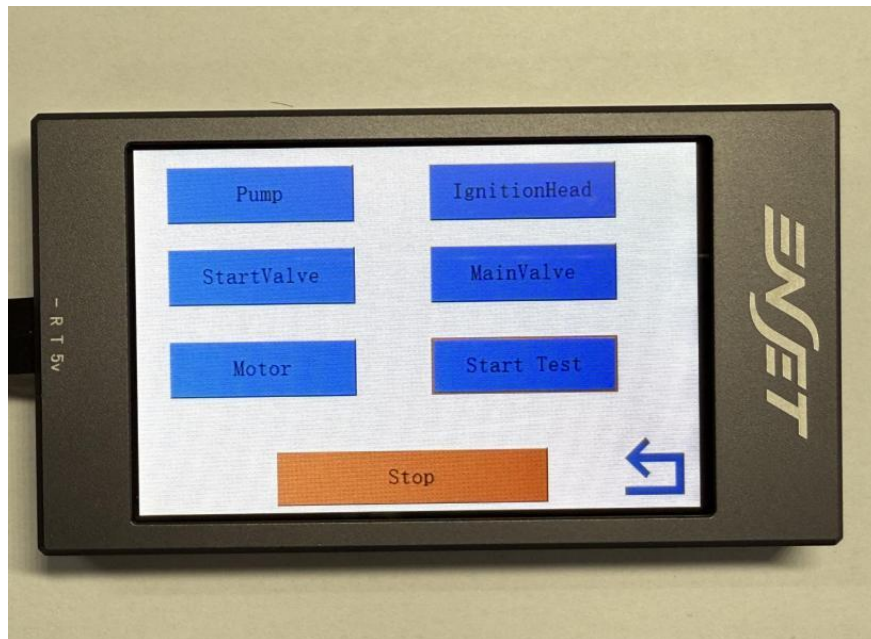
4. Fuel consumption correction: Correct the display error of oil pump flow rate. Variations in pipeline resistance and fuel quality may introduce inaccuracies; adjust the percentage value accordingly to obtain a more precise fuel consumption reading, modifying it by a certain percentage if there is a discrepancy between actual consumption and the displayed value.

5. Response Modes: Five preset response modes and an automatic mode are available. Select the appropriate mode based on operating conditions; in environments with high temperatures or elevations, use the slower response mode for stable engine performance. The automatic mode suits most operating conditions, automatically adjusting engine response according to atmospheric pressure sensor data.

6. Power Off and Restart: Enable or disable the engine power-off and restart function. Users should understand the risks associated with this function based on their professional knowledge before enabling it.



Element Testing

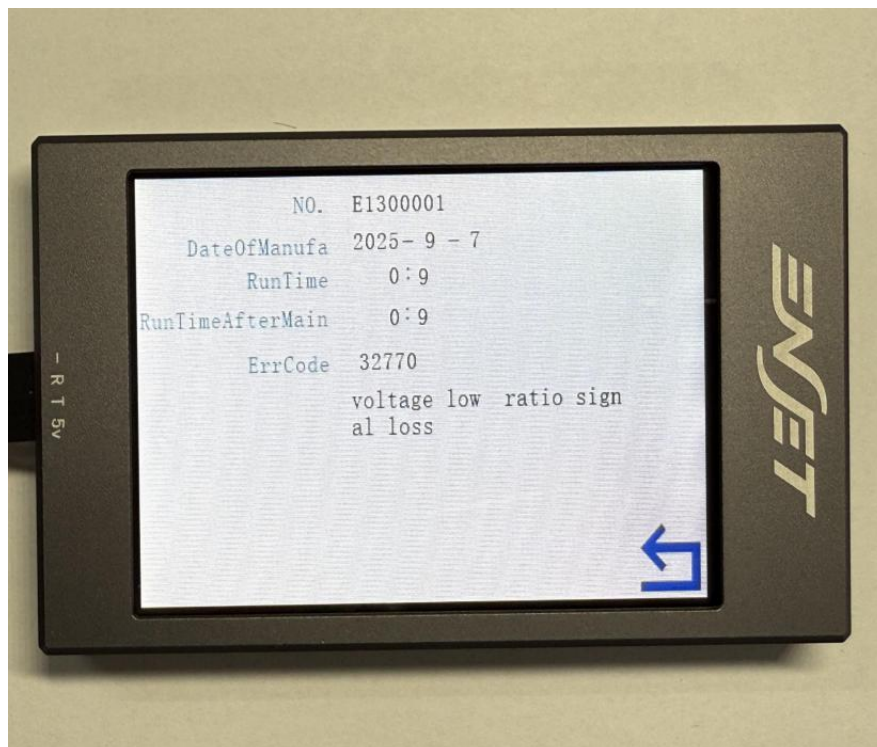


The engine's components can be tested in idle state.

1. "Oil Pump Test": The oil pump will gradually accelerate while simultaneously triggering the "Main Oil Valve Test," during which the main oil valve opens.
2. Starting valve test: Open the starting solenoid valve to establish oil flow.
3. Starter Test: The starter is activated and drives the rotor to rotate.
4. Fire Head Test: Ignition head lighting test.
5. Main oil valve test: The main oil circuit solenoid valve opens, allowing the main oil circuit to be connected.
6. Start-up test: The engine starts automatically and runs at idle.
7. When the test button is active, the return button cannot stop the test; you must click the test button again to make it pop up and stop the test, or click the "Stop" button to halt all tests.

Engine Information

1. Show Engine Number
2. Engine Production Date
3. Total engine operating time
4. Operation time after maintenance (reset after each routine maintenance)
5. Current Fault: Displays the engine fault code and fault information.





ECU function Introduction

1. The EUC controller features a built-in Bluetooth module that enables connection to the ENJET app for parameter adjustment.

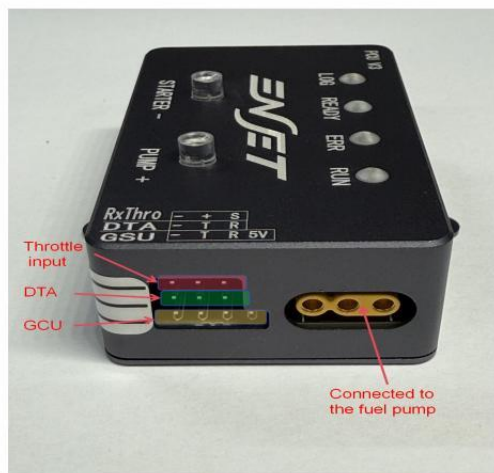
2. Basic Operation Instructions for the Button

When the engine is off, holding down the "STARTER-" button will rotate the starter; holding down "PUMP+" controls the oil pump's rotation. While the engine is off, pressing both the "STARTER-" and "PUMP+" buttons simultaneously starts the engine. After starting, holding "PUMP+" accelerates the engine; holding "STARTER-" decelerates it; pressing both buttons simultaneously stops the engine.

3. State Indicator Light

pigment	description	The LED staying lit continuously indicates this function.	LED twinkle	LED extinct
white	LOG	Data recording is normal	Storage card failure	No storage card
yellow	READY	The start switch is set to the ready state	-----	-----
red	ERR	A system fault has been detected.	-----	The system is operating without faults.
green	RUN	-----	The engine is running.	-----

4. graphic :





ECU Pin Definitions:

1: Throttle negative terminal	2: Throttle positive terminal	3: Throttle Signal	
4: DTA negative electrode	5: Send Tx	6: Rx Reception	
7: GSU Anode	8: Tx Send	9: Rx Reception	10: 5v output



Backhaul Module/Data Transfer Adapter Remote Monitoring Settings

The backhaul module supports two engine signal inputs and simultaneously transmits telemetry data to the remote controller, utilizing a total of 18 telemetry parameters.

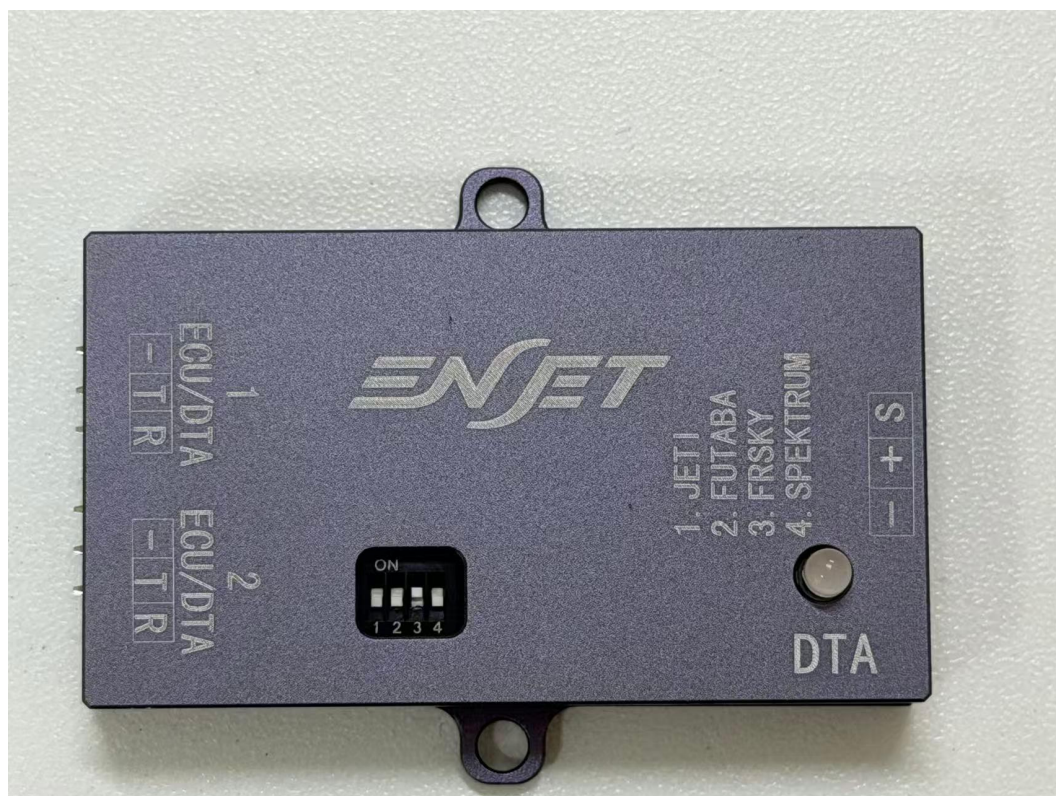
Dial switch definition:

1. JETI
2. FUTABA
3. Riske
4. SPEKTRUM

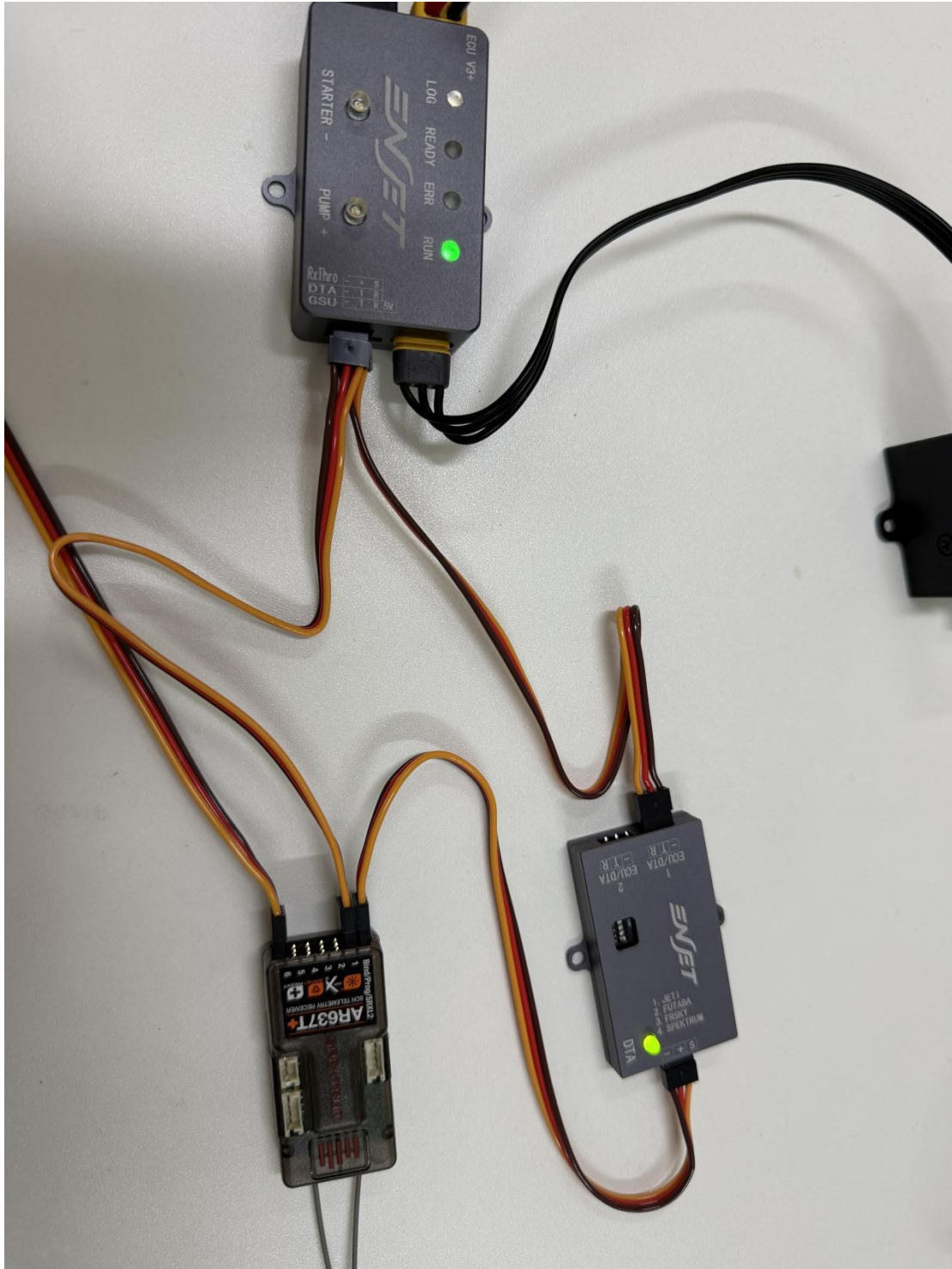
Indicator Definition:

Red light flashing: Data exchange error – the dial switch does not match the remote control type.

Green light flashing: Data communication is normal



The DTA connection is shown in the figure.





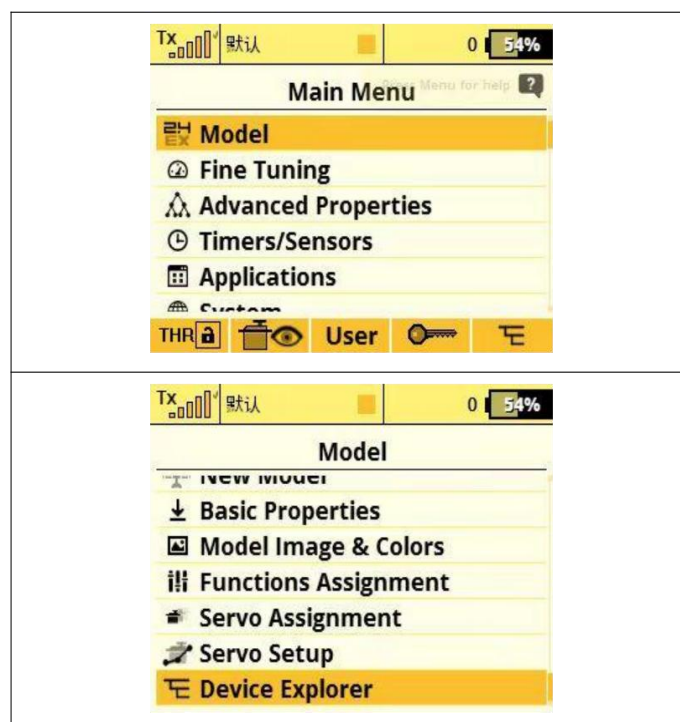
State Analysis:

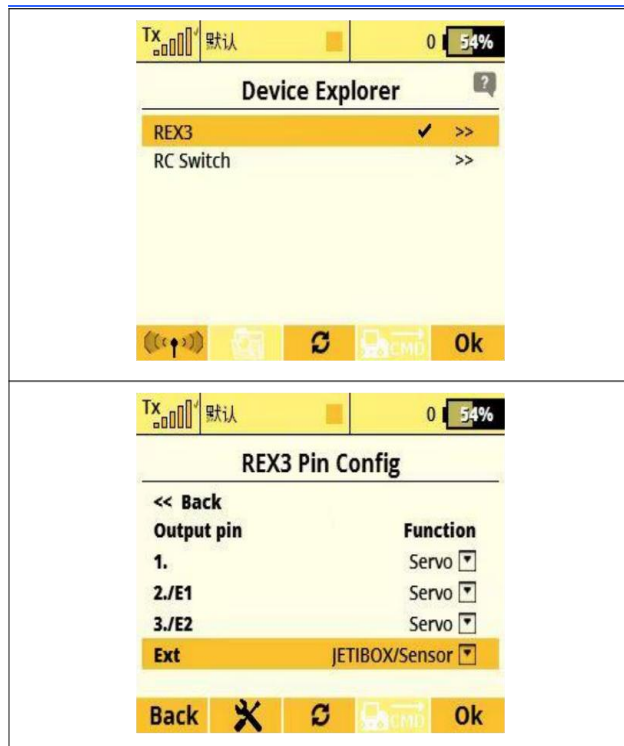
State Analysis	
state code	analyze
0	halt
1	Starting
2	Running
3	Cold Machine
4	Turn off and restart
7	Element Testing
8	Remote Calibration
9	Turn off and restart
11	Engine ready
33	Phase 1: Launch
34	Phase 2 of the Launch Process
35	Phase 3 of the Launch
36	Phase 4: Launch
37	Phase 5: Launch
38	Phase 6: Launch

JETI pattern :

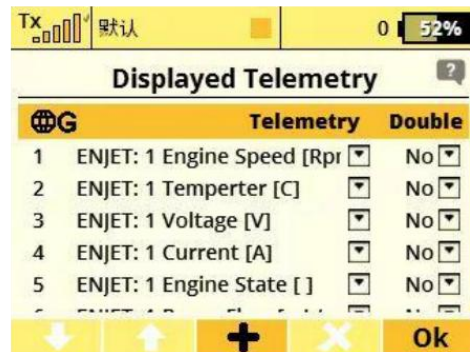
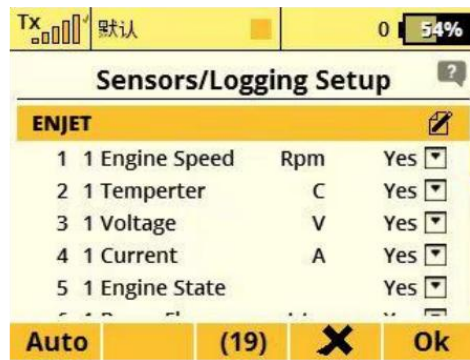
The backhaul module supports two engine signal inputs and simultaneously transmits telemetry data to the remote controller, utilizing a total of 14 telemetry parameters.

1. Set DTA code switch 1 to the ON position by turning it upward.
2. Connect the DTA to the receiver's EXT slot, or to a custom slot configured for JETIBOX/Sensor mode; the DTA should be connected to the ECU.
3. Turn on the remote control and receiver to power the engine.
4. Go to "Timing/Sensors" in the remote control menu.
5. On the "Timing/Sensor" interface, select "Automatic" and reset telemetry settings to "Yes".
6. The remote control automatically scans and identifies sensors, displaying them.
7. Return to "Timing/Sensor", then go to "Telemetry Display Settings". Click "+", select the desired telemetry value under "Telemetry".
8. Display the example on the JETI12 screen.





Telemetry Settings

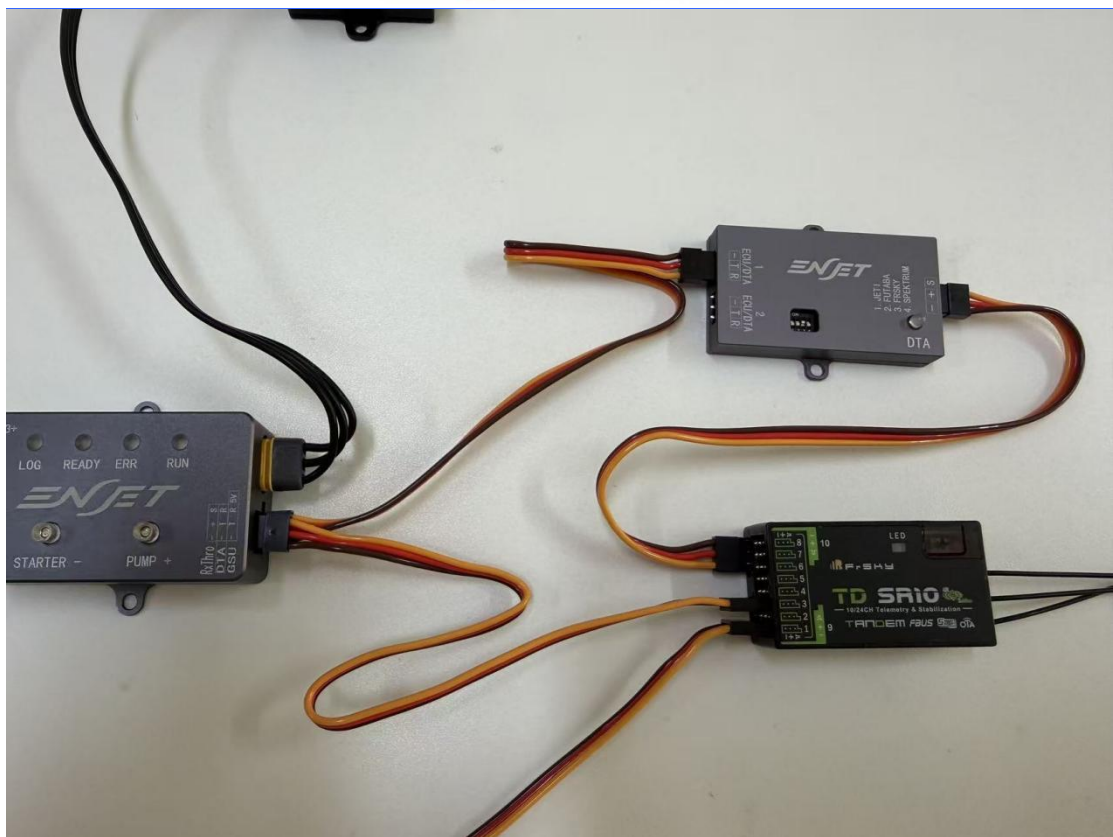


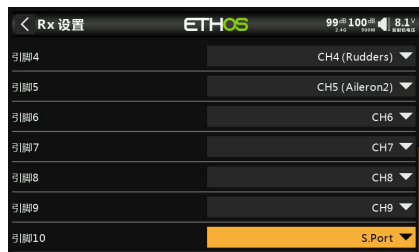
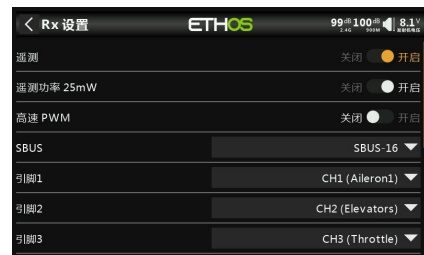


FrSky Mode

The backhaul module supports two engine signal inputs and simultaneously transmits telemetry data to the remote controller, utilizing a total of 18 telemetry parameters.

1. Set the DTA dial switch (number 3) to the ON position.
2. Connect the DTA to the receiver's S_Port slot (set the receiver's channel to the corresponding S_Port channel in Remote Control Settings). The DTA is also connected to the ECU.
3. Model Settings → Access the RF System → Select a registered receiver → Options → Telemetry (Enable) → If the return signal line is connected to Channel 10, set Pin 10 to S_Port.
4. Turn on the remote control and receiver to power the engine.
5. Go to Menu> Telemetry> Discover Sensors-Enable on the remote control
6. The remote control automatically identifies the engine sensors.
7. Displayable data: rotational speed, voltage, current, exhaust temperature, GASS flow rate (oil pump flow), remaining GASS fuel level (fuel consumption), hydraulic sensor (atmospheric pressure sensor), oil pump power, and engine status.
8. Engine status and oil pump power must be manually entered via the Custom Sensors menu. Select Auto-Detect → FF00 (Engine Status) → FF10 (Oil Pump Power).
9. For controls configured in the main interface, select "Telemetry" as the source and choose the members you want to add.



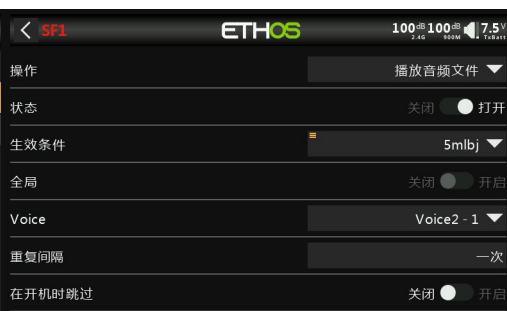
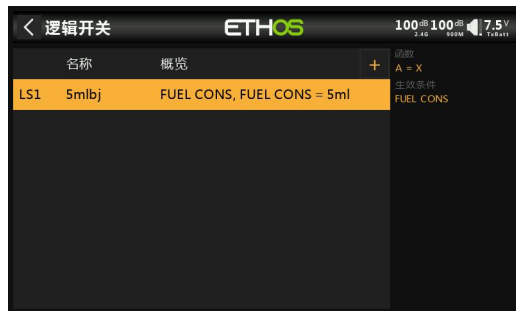


10. Take setting the "Fuel Consumption Warning" on the Ruisike X20RS as an example.

11. Set a fuel consumption warning by navigating to the "Logic Switch" section

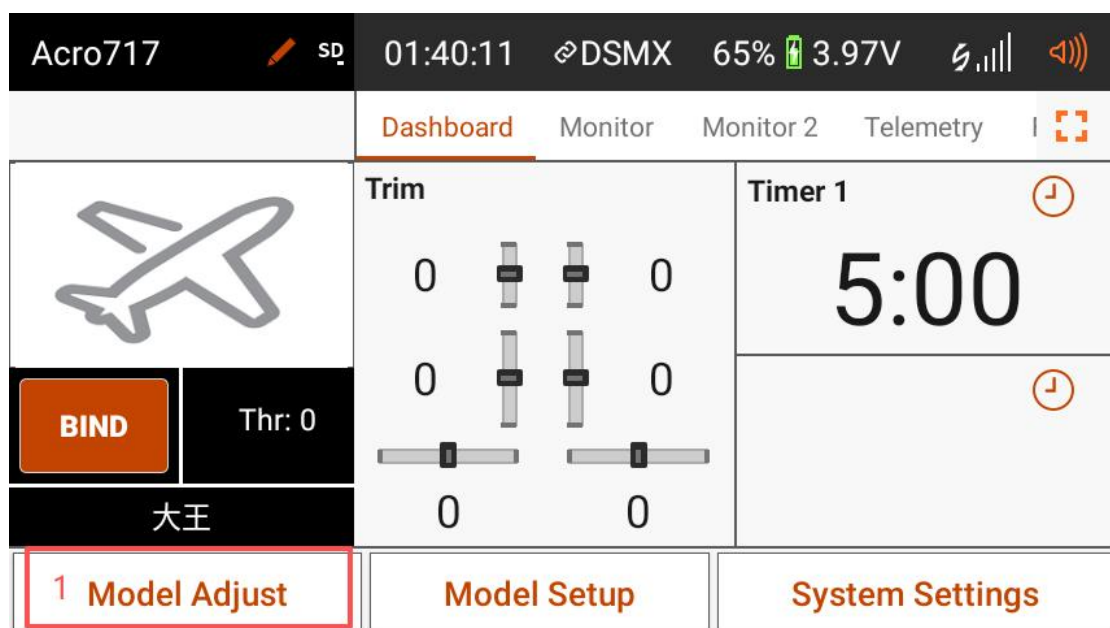


and adding a logic rule: Function $A = X$, Source (A) set to telemetry fuel cons, Value (X) set to the desired warning threshold, and Effect Condition set to telemetry FUEL CONS. Return to Special Functions to add an operation: Set it to play an audio file (pre-recorded or provided by the manufacturer), Status to On, Effect Condition to Logic Switch, and Member to the previously configured logic. Adjust the playback type according to preference.

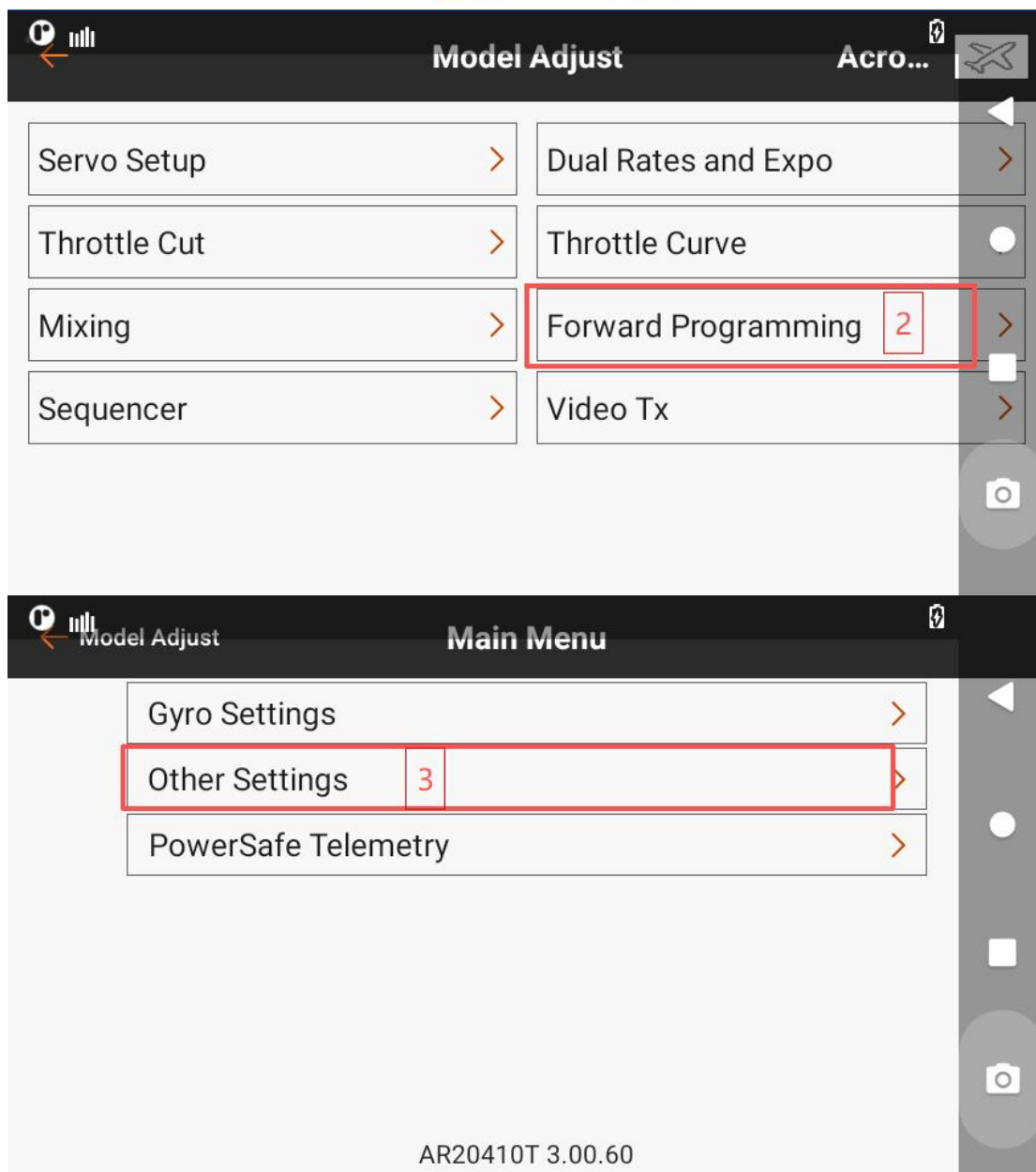


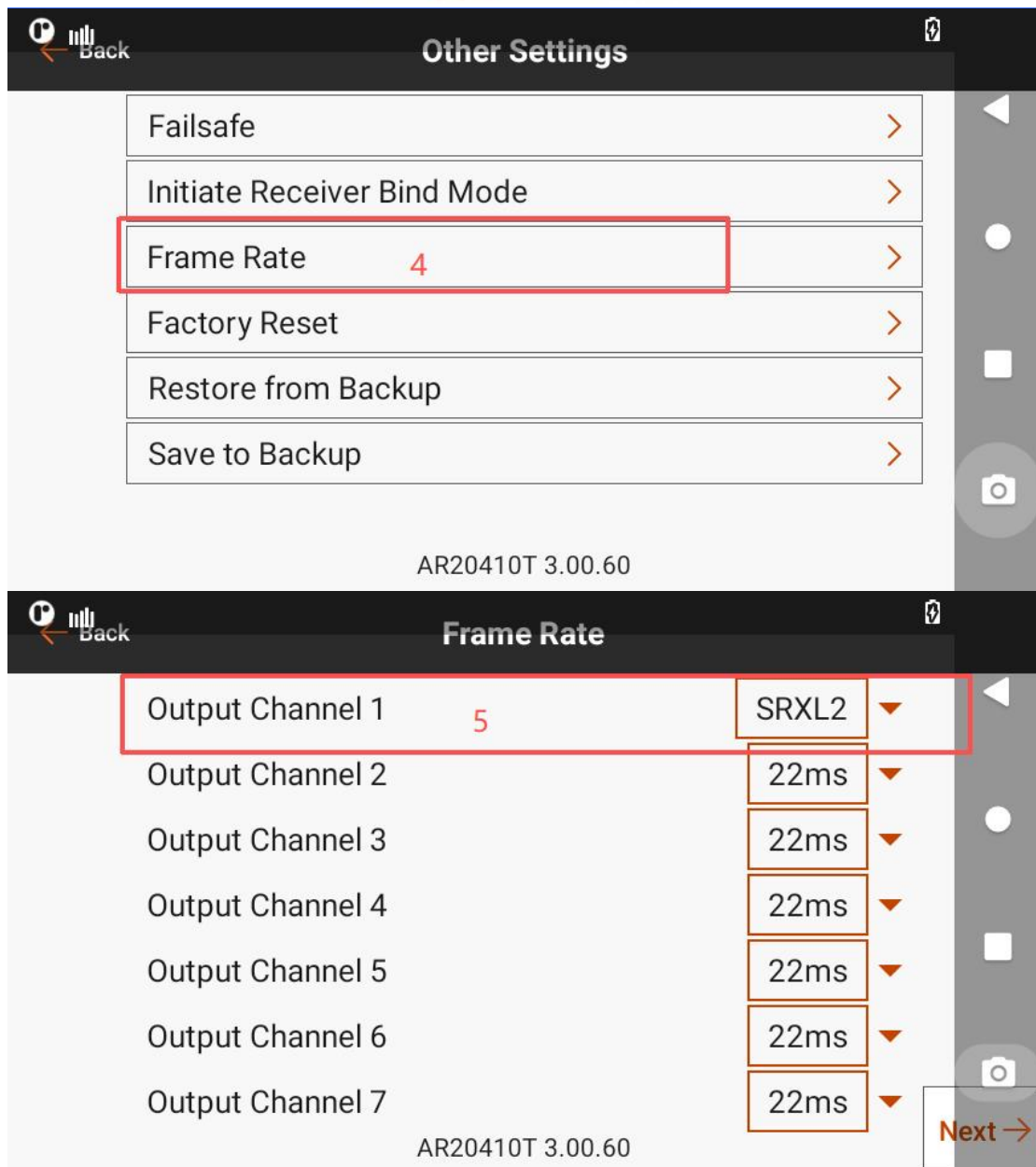
SPEKTRUM pattern

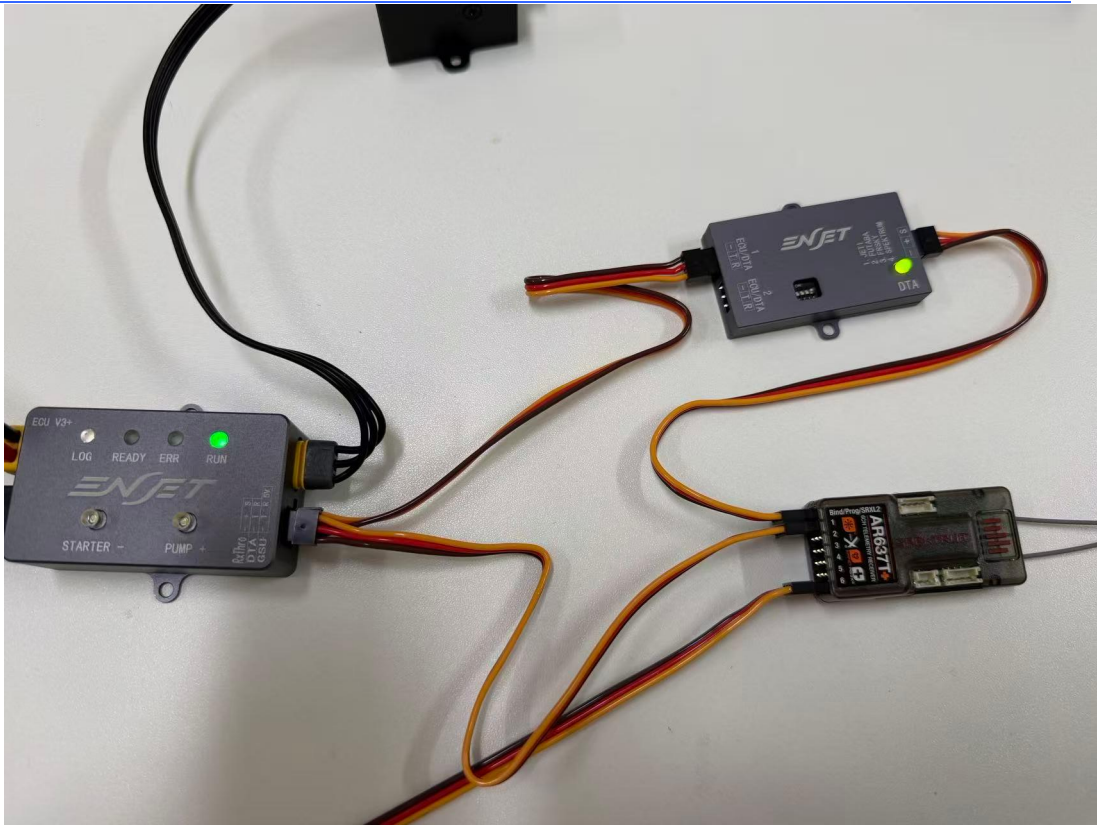
1. Displayable parameters: EGT (engine exhaust temperature), PUMP (oil pump power), Pack (engine voltage), RPM, engine status, Oil (oil pump flow rate), Flow (fuel consumption)
2. The engine does not support throttle display. Throttle 11% corresponds to engine data in slot DTA1, and throttle 22% corresponds to engine data in slot DTA2.
3. When both engines are input simultaneously, the remote control defaults to Channel 20. A dial switch on Channel 20 allows you to switch between display modes for both engine data or alternate displays of the two engines' data.
4. Remote control settings: Go to Model Settings> Telemetry> Turbopropeller> Display (On)> Save
5. To use the AR20410T receiver, set the first channel as the data return channel and switch the throttle channel to another available channel.
6. AR20410T Receiver Configuration Steps: 1. Select Model Calibration on the remote control → 2. Continue Programming → 3. Go to Other Settings → 4. Set Frame Rate → 5. Change Output Channel 1 to SRXL2



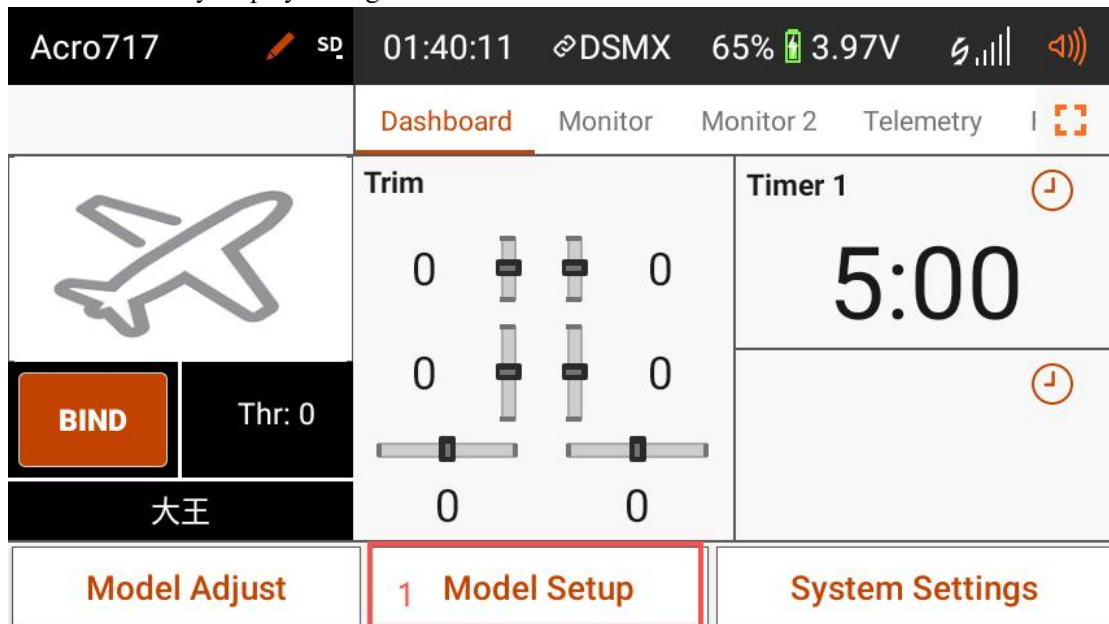
7.







- 8.
9. Add telemetry display settings to the remote control







Model Setup

Acro...

Frame Rate >	Range Test >
Aircraft Type >	Timers ●
Telemetry 2 >	Telemetry Utilities >
Audio Events >	Trainer >
Trim Setup >	Flight Mode Setup 
Channel Assign >	Analog Switch Setup >



Telemetry

Acro...

1: Turbine 3 >	7: Empty >
2: Empty >	8: Empty ●
3: Empty >	9: Empty >
4: Empty >	10: Empty >
5: Empty >	11: Rx V 
6: Emptv >	12: Flight Loa >



Model Setup **Turbine** **Acro...**

Remove Cancel **Save** 4 Display ☒

Min RPM: 30,000 RPM

Voice LOW RPM Freq: 5 Sec

Min Pack V: 10 V

Voice TURBINE BATTERY \$TURBINE_I Freq: 5 Sec

11:30 Acro 04:26:41 DSM2 73% 3.81V

飞行日志 最小/最大 **涡轮-状态** PriorityMonitor

EGT:	25 °C	状态:	Stop
油门:	11 %	Off Cond:	
Pump:	0 V	油:	0 mL
Pack:	12.45 V	Flow:	0 mL / M
转速:	0		

模型调校 模型设置 系统设定

10.



11:33

Acro

SD

04:29:28

DSM2

73%

3.81V

飞行日志

最小/最大

涡喷-状态

PriorityMonitor

EGT:	25 °C	状态:	Stop
油门:	22 %	Off Cond:	☐
Pump:	0 V	油:	0 mL
Pack:	12.43 V	Flow:	0 mL/M
转速:	0		☐
			☐

模型调校

模型设置

系统设定

11:30

Acro

SD

04:26:41

DSM2

73%

3.81V

飞行日志

最小/最大

涡喷-状态

PriorityMonitor

EGT:	25 °C	状态:	Stop
油门:	11 %	Off Cond:	☐
Pump:	0 V	油:	0 mL
Pack:	12.45 V	Flow:	0 mL/M
转速:	0		☐
			☐

模型调校

模型设置

系统设定



11:31

模型设置

通道分配

Acro

CH/Port	输出	输入	F-Rate/Res
17 A17:	Aux 17	禁用	Var/512
18 A18:	Aux 18	禁用	Var/512
19 A19:	Aux 19	禁用	Var/512
20 A20:	Aux 20	开关E	Var/512

11:33

Acro

SD

04:29:28

DSM2

73%

3.81V

飞行日志

最小/最大

涡轮-状态

PriorityMonitor

EGT:	25 °C	状态:	Stop
油门:	22 %	Off Cond:	
Pump:	0 V	油:	0 mL
Pack:	12.43 V	Flow:	0 mL/M
转速:	0		

模型调校

模型设置

系统设定



Futaba pattern

1. The Futaba telemetry module simulates all engine data as temperature sensors, occupying slots 8 through 23.
2. Connect the DTA to the receiver's SBUS2 slot. Connect the DTA to the PCU.
3. Turn on the remote control and receiver to power the engine.
4. Set the DTA dial switch (position 2) to the ON position.
5. Next, we will develop a system to display more comprehensive telemetry information.

槽位	遥测名称	
8	1号发动机转速	Engine1EngineSpeed
9	1号发动机排气温度	Engine1Temperter
10	1号发动机电压	Engine1Voltage
11	1号发动机电流	Engine1Current
12	1号发动机发动机状态	Engine1EngineState
13	1号发动机油泵流量	Engine1PumpFlow
14	1号发动机燃油消耗量	Engine1FuelCons
15	1号发动机油泵功率	Engine1PumpPower
16	2号发动机转速	Engine2EngineSpeed
17	2号发动机排气温度	Engine2Temperter
18	2号发动机电压	Engine2Voltage
19	2号发动机电流	Engine2Current
20	2号发动机发动机状态	Engine2EngineState
21	2号发动机油泵流量m/min	Engine2PumpFlow
22	2号发动机燃油消耗量ml	Engine2FuelCons
23	2号发动机油泵功率	Engine2PumpPower

Fault Code

Start Fault 1	Timeout occurred after starting Phase 1
Start Fault 2	Timeout occurred during starting Phase 2
Start Fault 3	Timeout occurred during starting Phase 3
Start Fault 4	Timeout occurred during Phase 4 startup
Start Fault 5	Timeout occurred during initiation of Phase 5
Start Failure 6	Timeout occurred during initiation of Phase 6
Battery voltage is low	The battery voltage is too low. Charge it before use
High battery voltage	The battery voltage is higher than the engine's set value.
Firehead failure	The ignition head has burned out or the circuit is broken.
Abnormal temperature signal	The thermocouple is damaged and needs to be replaced.
Non-connected engine	Communication failure between PCU and engine; check for open circuits in the wiring harness and replace it with a new one.
Remote control signal lost	No remote control value input detected

Common Faults and Their Solutions

Start Failure



specification of problem	analysis of causes	remedial measure
Engine ignition failure	The fuel line is not pre-filled with fuel; the fuel line is bent or blocked. Spark plug failure	Use the GSU test function to fill the oil pipe with fuel When using the GSU's "Test Firehead" function, no current is displayed or no bright spot is visible from the rear nozzle. In this case, please contact after-sales service for factory repair.
Engine startup failed	Battery level is low Starting motor fault Spark plug failure	Battery Charging Return to the factory for repair. Return to the factory for repair.
The throttle speed does not match the actual engine speed.	Remote calibration not performed	Re-calibrate Remote Control
The starter motor is slipping and producing abnormal noise.	There is fuel on the contact surface between the compression turbine nut and the clutch rubber ring of the starting motor. Gasket ring wear	Clean the rubber ring with a cotton swab dipped in alcohol or cleaning solution, then replace it.
Engine ignition succeeded but started abruptly.	There are bubbles inside the fuel supply pipe. The oil pump is not working.	There is an oil leak in the oil line; check all oil pipe joints.
The exhaust temperature or engine speed is unstable.	The remote control antenna signal is interfered with.	Identify Interference Sources
The oil pump does not operate after startup.	Turnover or circuit fault	Check whether the oil pump is running stuck or if there is a fault in the drive circuit.
The oil pump has already supplied oil to the engine; however, only white smoke is emitted from the engine, and there is no flame in the combustion chamber.	Insufficient flame power (due to aging, carbon buildup, or oil flooding)	Return to the factory for repair.
The oil pump has started operating; there is no flame inside the engine, nor any white smoke is emitted.	No fuel is entering the engine.	Remove the fuel inlet pipe from the engine fuel injector and check for fuel flow. If no fuel flows, inspect the fuel line for excessive resistance or blockage; alternatively, increase the starting fuel supply to test.
Preheating time is too long	Insufficient starting fuel quantity	The engine will not accelerate until its preheating temperature reaches 100°C after startup. If this process is very slow (assuming no fuel injection occurs), you can increase the starting fuel amount in



specification of problem	analysis of causes	remedial measure
		the settings; the exact increment depends on whether fuel injection is required during engine startup.
The flame goes out during the startup process.	Air has entered the oil circuit, or the oil level is too low.	When the engine's starting speed exceeds 10,000 rpm, the flame goes out and white smoke is emitted. Check if there is excessive resistance in the fuel line (e.g., impurities in the oil filter), and increase the starting fuel amount in the settings.
The starting motor rotates, but the engine rotor does not move.	The clutch O-ring is contaminated with oil, or the clutch is stuck and cannot disengage.	Check whether the clutch is too dirty to disengage, and whether the clutch O-ring has oil leakage causing slippage. (If the clutch cannot disengage during startup, gently tap the starter housing with a tool to vibrate it and allow the clutch to release.)
Setting of startup parameters for switching from diesel to kerosene	Kerosene requires a greater amount of fuel than diesel.	The engine starts normally with diesel, but fails to start when switched to kerosene; set the starting fuel quantity 10–20% higher than the diesel specification.
Multiple startup attempts failed	Fuel accumulation is inevitable inside the engine; restarting it poses a fire risk. Therefore, a carbon dioxide fire extinguisher must be kept nearby and kept away from flammable or explosive materials.	The procedure is as follows: restart the engine, immediately activate remote shutdown when combustion begins to allow automatic cooling until 90°C, then restart again and repeat the shutdown process immediately after ignition starts. Repeating this several times will consume all residual oil inside the engine. (Before applying this method, drain all excess oil from the engine interior; remove accumulated oil from the intake port toward the rear by pouring it out from the front and wiping clean with a tissue. Due to the engine's internal structure, oil cannot be drained from the rear.)



running fault

fault phenomenon	analysis of causes	process mode
If you press the accelerator pedal too hard or release it abruptly, the engine will stall.	Accelerating or decelerating too quickly	Lower Response Mode
The idle speed remains too high and cannot be reduced to the set value.	There is a discrepancy between the minimum power limit or remote control value of the oil pump and the calibration value.	In high-altitude areas, it is recommended to appropriately increase the idle speed and recalibrate the throttle travel.
The engine speed does not reach its maximum when the throttle is fully pressed, or increases slowly.	Excessive resistance in the oil circuit	Each time the engine starts up, it must learn the minimum and maximum values of the fuel pump pressure. The engine reaches its maximum acceleration only after learning the highest fuel pump pressure value. Check if the fuel line resistance is too high and recalibrate the throttle travel.
After the engine accelerates to a certain RPM, the RPM display suddenly changes to 0.	Rotational speed sensor malfunction	Return to the factory for repair.