

AG68 module manual

The AG68 module integrates a taxiing and braking correction gyroscope, an electromagnetic brake controller and an electric landing gear controller, which are applied to a fixed-wing model aircraft with the steering nose wheel.

The AG68 module can correct the defective trend of model aircraft taxiing on the ground and respond accurately to the rudder stick.

The AG68 module can control the force of the electromagnetic brake to keep the model aircraft taxiing on the right way.

The AG68 module with electric landing gear controller, simple and compact, easy to install.

The most important highlight of the AG68 module is that it uses intelligent adaptive algorithm, which eliminates the tedious operation such as setting sensor direction and adjusting sensitivity of traditional model gyroscope products. It only needs to automatic direction adaptation once during installation, and there is no need to adjust when using, so that its installation and use is very simple and convenient.

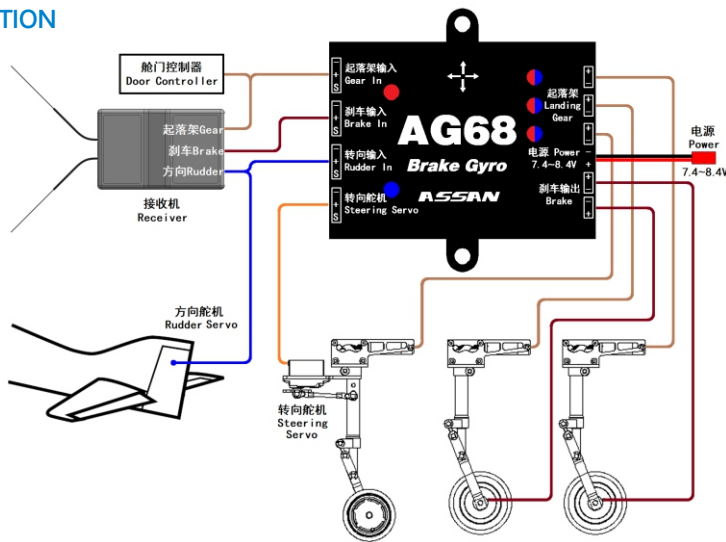
The electric landing gear controller of the AG68 module can also match various types of electric landing gear below 35kg class through very simple adaptation operation.

The AG68 module has outstanding effects on taxiing correction and brake correction, and can be widely used in all kinds of model aircraft requiring long distance taxiing take-off and landing, such as scale model aircraft using Electric Ducted Fan and JET power.

INSTALLATION

The AG68 module supports six-direction installation, which can either make the module bottom surface parallel to the bottom plane of the model aircraft (the module label face up or down), or make any one of the four arrows on the module label perpendicular to the bottom plane of the model aircraft. The module is securely attached to the model aircraft using screws or double-sided adhesive. Caution, the AG68 module cannot be installed near the motor or engine!

CONNECTION



Caution, the AG68 module can only be plugged into two wire electric landing gear, rather than three wire electric landing gear! The three wire electric landing gear requires not the landing gear controller but connecting directly to the receiver gear channel.

POWER ON INITIALIZATION

After installation of the AG68 module, power on the model aircraft, red and blue lights flash quickly indicating that the module is initializing. At this time, do not move the model aircraft, do not move the transmitter rudder stick either. After the AG68 module initialization is complete, the blue light is solid on or flash shortly.

The blue light solid on indicating that the AG68 module considers that the transmitter gear switch is at the landing gear extend position, and the steering nose wheel can turn by moving the transmitter rudder stick. The blue light flash shortly indicates that the AG68 module considers that the transmitter gear switch is at the landing gear retract position, and the steering nose wheel cannot turn by moving the transmitter rudder stick. If the actual state of the landing gear does not correspond to the status indicated by the blue light, please refer to "Adjust landing gear direction" or "Automatic direction adaptation" below, in order that the AG68 module can correctly identify the transmitter gear switch state.

If the blue and red lights is always flash quick and the initialization cannot be completed, please check whether the model aircraft was vibrated, whether the transmitter is on, whether the transmitter rudder stick is in the neutral position, and whether the receiver signal good, whether the "Rudder In" of the module is properly connected to the receiver rudder channel.

Caution, the AG68 module records the neutral point of the transmitter rudder stick during power on initialization, if you adjust the transmitter rudder trim in flight, will make AG68 module think that the rudder stick has been moved, may make the steering nose wheel to one side, causing landing accidents! So do not adjust the transmitter rudder trim in flight! After adjusting the transmitter rudder trim on the ground, you need to cycle the model aircraft power, so that the AG68 module can re-record the neutral point of the transmitter rudder stick.

LANDING GEAR ADAPTATION

Electric landing gear has a variety of sizes, all kinds of electric landing gear locked-rotor current vary from others. In order to make the AG68 module accurately identify the landing gear in position, must correct identification of locked-rotor current of landing gear. If the landing gear indicator lights(red or blue) on the AG68 module does not go off after the landing gear is in position during use, after slightly longer time, may damage the landing gear. At this time, the power supply of the model aircraft must be turn off immediately, and the landing gear adaptation should be carried out after the power is turned on again. If it is found that the landing gear does not move or is stuck in the process of retraction and extension, the landing gear adaptation is also required.

Within one minute after the initialization of the AG68 module, quickly switch back and forth the transmitter gear switch of 3 or more times(6 or more times in total), the red and blue lights of the AG68 module alternating flash slowly, indicates that landing gear adaptation has started. The AG68 module at this time is on the basis of the transmitter gear switch state control landing gear retraction or extension, three landing gear indicator lights (red or blue) light in turn. Carefully observe the landing gear, when **any** landing gear is in position for **one second**, please toggle the transmitter gear switch once, and the landing gear adaptation is completed.

If the transmitter gear switch is not be toggled for 10 seconds after the landing gear action, the AG68 module will stop the landing gear, but the adaptation is not complete. Toggle the transmitter gear switch again, the landing gear continues to retract or extend, and continue the landing gear adaptation.

Note that the AG68 module will not start the landing gear adaptation no matter how to toggle the transmitter gear switch more than 1 minute after initialization!

CHECK THE STEERING NOSE WHEEL DIRECTION

Before checking the steering nose wheel direction, make sure the model aircraft rudder is set correctly. When you push the transmitter rudder stick to the **left**, the model aircraft rudder should turn to the **left**. If it is not correct, please reverse the rudder channel on the transmitter. After confirm that the model aircraft rudder is moving in the right direction, the steering nose wheel should turn to the **left** when the transmitter rudder stick is pushed to the **left**. If it is **correct**, select the steering nose wheel **does not need to be reversed** in the next step of "**Automatic direction adaptation**". If it is **not correct**, select the steering nose wheel **needs to be reversed** in the next step of "**Automatic direction adaptation**".

AUTOMATIC DIRECTION ADAPTATION

If the installation of the AG68 module is completed or the installation direction is adjusted, and if the rudder or gear channel on the transmitter had be reversed, the AG68 module must perform an automatic direction adaptation function once to make the module run correctly.

Switch the transmitter gear switch on the landing gear **extend** position, and power the model aircraft **horizontally**. **Within one minute** after the initialization of the AG68 module, quickly move the transmitter rudder stick to the **left and right ends** for 5 or more times(10 or more times in total), and finally let the rudder stick stop at the **left end**. The blue and red lights of the AG68 module alternating flash quickly, indicating the starting automatic direction adaptation of the module.

If the steering nose wheel **does not need to be reversed**, keep the rudder stick at **left end** until automatic direction adaptation is complete.

If the steering nose wheel **needs to be reversed**, immediately after the AG68 module red and blue lights start flashing alternately, push the rudder stick to **right end** and keep the rudder stick at **right end** until automatic direction adaptation is completed.

Note that the AG68 module will not start the automatic direction adaptation no matter how to move the rudder stick more than 1 minute after initialization!

If you cannot start automatic direction adaptation after following the above proceedings, please temporarily increase the transmitter rudder channel ATV to 100%, again for automatic direction adaptation. After the automatic direction adaptation is completed, restore the original setting of the transmitter rudder channel ATV.

After the AG68 module blue and red lights alternating flash 3~5 seconds, the automatic direction adaptation is completed, the module can be used normally. If the blue and red lights always alternating flash and the automatic direction adaptation cannot be completed, please check whether the model aircraft is standing horizontally, or whether the AG68 module is correctly installed in the direction described in the "Installation" section above.

CHECK THE STEERING NOSE WHEEL RESPONSE

After the automatic direction adaptation of the AG68 module is completed, it is necessary to check whether the steering nose wheel movement direction and the correction response direction are correct.

When you push the transmitter rudder stick to the **left**, the steering nose wheel should turn to the **left**. If it is not correct, please do "**Automatic direction adaptation**" again and select the steering nose wheel **needs to be reversed**.

If the steering nose wheel is moving in the right direction, tilted the model aircraft nose slightly (no more than 40°) and swing the model aircraft nose to the **left**. The steering nose wheel should turn to the **right**. If it is not correct, please do "**Automatic direction adaptation**" again and select the steering nose wheel **does not need to be reversed**.

INDICATOR LIGHT

Red and blue lights flash quickly	Power on initialization.
Blue light solid on	Rudder stick is in neutral point.
Blue light double flash	Rudder stick is moved, not in neutral point.
Blue light flash shortly	The model aircraft tilts more than 40°, or the landing gear is retracted. The module correction function off.
Red light solid on	Electromagnetic brake is on.
Red light flash shortly	Electromagnetic brake is off.
Red light flash slowly	Electromagnetic brake overcurrent protection.
Red and blue lights alternating flash quickly	The module is automatically adapting the mounting direction, the rudder and gear signal direction.
Red and blue lights alternating flash slowly	The module is adapting the landing gear locked-rotor current.

SPECIAL FUNCTIONS

Tilt the model aircraft over 40°, the AG68 module will stop correction function after two seconds, but the steering nose wheel will respond to the transmitter rudder stick, so that you can observe and adjust the steering nose wheel.

Retract the landing gear of the model aircraft, the AG68 module will immediately stop correction function and keep the steering nose wheel in neutral position. Extend the landing gear of the model aircraft, the AG68 module will start correction function after 5 seconds.

If the electromagnetic brake is not turned off for more than one minute, the AG68 module will automatically turn off the brake to prevent the electromagnetic coil in the brake from overheating.

The brake force of the AG68 module is adjustable. The brake force can be adjusted by controlling the brake channel with the knob or slider on the transmitter.

The AG68 module has power on position protection function of landing gear. No matter the transmitter gear switch is in any state, the AG68 module will not retract or extend the landing gear immediately after power on. When the transmitter gear switch is toggled, the AG68 module will retract or extend the landing gear.

FAQ

1. As a result of the AG68 module has power on position protection function of landing gear, can cause the following phenomena: When the landing gear is extended, power on the model aircraft, if the transmitter gear switch in the landing gear retracted position, then the landing gear will be kept extended, but the AG68 module received a transmitter landing gear retracted signal, make the steering nose wheel does not respond to the transmitter rudder stick, which leads to the operator mistakenly thought the AG68 module is out of order. Just switch the transmitter gear switch to the landing gear extend position and wait 5 seconds for the steering nose wheel to respond to the transmitter rudder stick.

2. When the landing gear is extended, the steering nose wheel does not respond to the transmitter rudder stick, while the landing gear is retracted, the steering nose wheel responds to the transmitter rudder stick, which requires automatic direction adaptation. Please read the above section "**Automatic direction adaptation**" carefully and follow the procedure described above.