

# Before Flying your Scale Helicopter

**First Flights** For the beginner pilot, a training pod is strongly recommended to assist in learning to hover the helicopter with substantially reduced risk of crashing. Beginners should also break in the engine without the fuselage. These systems provide the training capability to allow pilots to become familiar with the helicopter controls and how they relate to the behavior of the helicopter before actually leaving the ground.

## Starting Your Engine

**Fuel** 15-30% Helicopter fuel is recommended as it contains more oil. Use a fuel filter between the fuel gallon and the heli to remove any dirt that could stall the engine. Fuel the helicopter by removing the fuel line from the carburator and replace when finished.

**Needle Valve** Following the engine manufacturer's instructions, turn the main needle valve until closed and open to the setting the instructions call for. Different engines will have different settings.

**Radio** Always turn the transmitter on first, then the helicopter & gyro, When finished, reverse the procedure, first turn off the heli & gyro, then the transmitter. If the radio acts erratically or intermittently, find the problem before starting the engine.

**Glow Plugs** Remove the canopy (or use the optional remote glow plug connector) and connect the 1.5V glow driver to heat the glow plug. Warning!! glow plugs operate at 1.5V not 12V.

**Engine** Before starting the engine, check that the carb barrel is rotated to the idle setting and make sure the electric starter is turning in the counter-clockwise direction.

**Starting** If you do not already have a 6mm hex start wand, you will need the optional CN0426. Set the TX for low throttle with the trim centered. Holding the rotor head in one hand, insert the hex shaft into the coupler and press down slightly to engage the starting shaft into the fan. Engage the starter until the engine starts. If the engine does not start recheck all previous points. Remove the start wand using the two step system described on page 10. NOTE: The main blades should not turn until the engine RPM is above idle.

**Stopping** To stop the engine, with the throttle stick in the low position, move the trim all the way to the low position or toggle "throttle cut" switch.

## If the Engine Does Not Start

**Q.** The engine does not turn easily with the starter.  
**A.** The starter battery may be too weak or the engine is flooded. For flooding, remove the glow plug and turn the engine over several times to clear the combustion chamber of fuel and retry.

**Q.** The engine rotates and tries to start but doesn't.  
**A.** The glow plug may be getting old. The glow plug batteries are weak. The engine may not be getting enough fuel or too much fuel. The starter may be turning the wrong direction.

**Q.** The engine just does not start.  
**A.** The glow plug may be burned out. Fuel may not be getting to the engine, check for a clogged fuel line, dirt in the carburator or the main needle needs to be opened out slightly.

**Q.** The engine starts but immediately stops.  
**A.** There is a clog in the fuel line, the carburator barrel is not open enough at idle. Open the throttle trim by 1-2 clicks as the main needle is set too lean Helicopter engines have a low speed needle which is factory set, beginners should not adjust it!!

## Adjusting the Blade Tracking

**Pitch** On page 39, you set the pitch range using a pitch gauge. Once the helicopter is flying the pitch setting have to be fine tuned. Using appropriate training gear, increase the throttle until just before the helicopter lifts off. Sight the rotor disk from 15' back. If there appears to be 2 rotor disks then adjust Pushrod C (scratch a "1" on one blade grip and blade root to avoid confusion) until only one disk appears. Using colored tape mark one blade so you can adjust the correct blade.

