

2018 RCPRO Club 40 Electric Rules for the Airplanes - Section 17 (Version 5/29/2018)

17.1 Airframes

17.1.1 Airframes Allowed

The World Models Sky Raider Mach II ARF or ARC, per instructions

The World Models LA Racer 40 ARF, per instructions

The StegallHobbies.com Club 40 Racer (Sky Raider Mach II clone), per instructions.

SIG 4-STAR 54 EG ARF, per instructions

17.1.2 Airframe Variations

All factory versions are approved.

Additional color trim or recovering is encouraged.

You may modify older versions to match current factory versions.

You may mix and match fuselages, wings, and empennages of The World Models planes and the Club 40 Racer. This does not apply to SIG 4-STAR 54 EG ARF.

Landing gear of any airframe may be changed with a minimum of 8 inches lateral separation of wheels.

Wheel pants are allowed on any airframe.

Airframe must be structurally sound and safe.

17.2 Classes (in the order of advancing performance)

17.2.1 Club 40 Electric Bronze:

17.2.1.1 Minimum weight: Minimum weight RTF with battery is 5 lb. and 0 oz.

17.2.1.2 Maximum weight: Maximum weight RTF with battery is 6 lb. and 0 oz.

17.2.1.3 Motors: Must be of the brushless outrunner type and cannot exceed 50mm in diameter.

17.2.1.4 ESC: Must be commercially available at a cost of \$120 USD or less.

17.2.1.5 Batteries: Must be 4S1P Lipo configuration with a maximum weight of 16 ounces or 454 grams.

17.2.2 Club 40 Electric Silver

17.2.2.1 Minimum weight: Minimum weight RTF with battery is 5 lb. and 4 oz.

17.2.2.2 Maximum weight: Maximum weight RTF with battery is 6 lb. and 0 oz.

17.2.2.3 Motors: Must be of the brushless outrunner type and cannot exceed 50mm in diameter.

17.2.2.4 ESC: Must be commercially available at a cost of \$150 USD or less.

17.2.2.5 Batteries: Must be 5S1P Lipo configuration with a maximum weight of 20 ounces or 566 grams.

17.2.3 Club 40 Electric Gold

17.2.3.1 Minimum weight: Minimum weight RTF with battery is 5 lb. and 8 oz.

17.2.3.2 Maximum weight: Maximum weight RTF with battery is 6 lb. and 0 oz.

17.2.3.3 Motors: Must be of the brushless type and cannot exceed 64mm in diameter.

17.2.3.4 ESC: No limitations.

17.2.3.5 Batteries: Must be 6S1P Lipo configuration with a maximum weight of 24 ounces or 680 grams.

		Maximum Weight	Maximum Weight	Minimum RTF Weight	Minimum RTF Weight	Maximum RTF Weight	Maximum RTF Weight
Class	Battery Cells	Battery Ounces	Battery Grams	Plane in Pounds	Plane Grams	Plane Pounds	Plane Grams
Bronze	4	16 oz	454g	5 Pounds	2264g	6 Pounds	2717g
Silver	5	20 oz	566g	5 1/4 Pounds	2377g	6 Pounds	2717g
Gold	6	24 oz	680g	5 1/2 Pounds	2490g	6 Pounds	2717g

17.3 Requirements:

17.3.1 Airframe:

A minimum of 3 hinges per aileron, 4 per elevator and 3 per rudder are required.

Wheels must have minimum diameter of 55 mm and minimum width of 20 mm. Hint: Stock wheels (60 mm) or DuBro 2 1/4 Low Bounce (57 mm)

Planes must have canopy, original or very similar.

Pushrods, if replaced, must exit the fuselage sides in the same position as original specification.

Servos controlling the pitch, roll and yaw functions shall be of adequate strength for the weight and speed of the aircraft. Two-screw servos especially must be mounted securely and of adequate strength.

No EZ-type connectors on ailerons, elevator or rudder.

17.3.2 Motor, ESC, Batteries:

All motors, ESC, and batteries must be stock and commercially available.

Motor must be mounted securely using standoffs or spacers, or enclosing mount.

ESC may be located outside of the fuselage shell but must be securely attached.

Batteries must be strapped down securely.

Batteries may not be high voltage or overcharged.

Batteries will be checked and may not be over the nominal voltage of 4.2 volts per cell plus 0.5 volts.

17.4 Allowed Modifications

17.4.1 Airframe: Assemble according to the manual, with the materials provided, except for:

Recovering plane is allowed

Lightening the airframe is allowed by removing wood inside the outer shape.

The outer dimensions and shape of the airframe may not be modified.

Wings and stabilizers may be fully sheeted.

Dual aileron servos are allowed.

Control surfaces may be hinged with the supplied metal or CA hinges, other CA hinges, plastic hinges or hinge points (Robart or similar).

Hinge lines may be sealed using tape, stick-on plastic covering, or iron-on plastic covering.

Canopies made of fiberglass that are clones of the originals are allowed

Wheel pants may be of any shape and from any supplier.

17.4.2 Propulsion System:

Shimming the engine mount to change the thrust line is acceptable.

Changing the engine thrust line vertically must be within 1/2" of the produced or designed location.

Throttle control must be set to fail-safe on loss of radio connection.

External accessible power system protection preventing inadvertent motor starts is encouraged.

17.4.3 Prop / Spinner:

Any spinner of not more than 2.5 inches in diameter is allowed.

Props may be of any kind, commercially available, modified, or hand made. No metal props.

Spinner weights that fit inside a spinner, Heavy Hub and aluminum Safety Spinner nuts are allowed.

17.4.4 Hardware:

Control horns, linkages may be replaced with similar hardware.

Pushrods may be of any style but must exit at the produced or designed location.

Nylon wing bolts are allowed.

You may substitute machine screws, nuts and screws of same or larger diameter.

17.4.5 Control System:

Stabilizing radio control systems may be used. Gyros, AS3X, and other technologies that improve flight handling are allowed.

Telemetry systems that provide flight data to the pilot are allowed.

Race CD will have the final say on legality of "modified" aircraft.

Inspectors may use templates or a "standard" aircraft. See Technical Inspection Form