

# **TRIANGLE SERIES**

**RADIO CONTROL PYLON CHAMPIONSHIP SERIES**

**46 WARBIIRD CLASS**



**DIRECTED BY KEVIN NORRED & JOE DELATUER  
SUPPORTING CLUBS: SALINAS AREA MODELERS**

2012 – 2013 TRIANGLE SERIES

# 46 WARBIRD RACING

RACING RULES



Basics of the Class:

Class of mixed Warbird Bombers/Fighters/Trainers

475sq in minimum and .46 engine max

No Breakouts or Class timing

# 46 Warbird

## Aircraft Rules and Limitations

DATED MATERIAL: December 3, 2011

All rules are to be followed as listed below. No changes or alterations will be allowed. Any alteration from these rules will result in disqualification.

The 46 Warbird racing event was designed as a two pylon-racing event that can be enjoyed by all sport pylon enthusiasts of intermediate or advanced skill levels. The class is not intended for entry-level pilots that are not familiar with high performance aircraft. Pilots not able to demonstrate safe control of their aircraft will be black-flagged.

### AMA Racing Safety & Marking of Aircraft

- All aircraft must have name and AMA number located inside of aircraft and visible upon safety inspection of the aircraft. Failure can result in AMA safety code violation.
- AMA racing insurance / waivers requires all personal on the flight line to wear ANSI, DOT, NOCSAE, or SNELL approved hard hats or safety helmets within 275 feet of the centerline of the race course. This includes all pilots, crew members, spotters, callers and helpers. Any individual not in compliance of this will not be allowed on the flight line or within the staging areas during the racing event. All pilots and team members are responsible for supplying their own hardhats or safety helmets. Each pilot can have one caller/spotter beyond the spectator line during the racing event per AMA regulations and guidelines. All pilots and crewmembers must sign an AMA release form releasing liability from any officials or associates of the racing series. All spectators must stay within the safety areas of the facility.
- It is recommended to have a 1” up to a 3” race number on the back of the pilots hardhat to help race officials identify aircraft currently racing.
- Aircraft markings and/or color schemes are optional and not need be scale. Bright color schemes are encouraged and will allow easier identification for pylon judges and race officials on the starting line. If aircraft are not easily recognized, confusion with other aircraft may occur. All Pilots will be required to register a race number. If an aircraft is unique and cannot be easily mixed up with another aircraft at an event, that pilot may choose not to put race numbers on their plane. If there is doubt between aircraft, an identification marker may need to be used.

### TYPE OF AIRCRAFT ALLOWED:

- Any scale replica of a piston engine, man carrying, propeller driven fighter/bomber aircraft that served in WWII, the Korean conflict, Vietnam or any Reno/Mojave/Phoenix Warbird Racer that raced in an official Unlimited race heat will be deemed legal. Military Trainers such as AT-6, T-34 and PT-26 are legal. Piston engine recon planes such as or similar to the J-3 Cub or Grasshopper not allowed. The Phoenix Models “Strega” and modified versions are legal as long as they resemble a P-51 or modified scale P-51 racer. No Biplane, Formula I aircraft and/or homebuilt type airplanes such as but not limited to Lancair or Glasairs allowed in class. World Models T-34 Mentors legal.
- The Warbird / Reno Racer must be a least standoff scale in appearance. They can be built from ARF kits, plans, or may be scratch built from plans or personal design. If they are to be scratch

built or modified to resemble a Reno racer or Warbird, you must have all major radiator scoops and vents that extend from the fuselage attached. Gun stacks or Exhaust headers not necessary. This is not a scale contest. Airplanes will not be judged for scale appearance but will not be allowed to race without all necessary scoops or blisters that distinguish the airframes design. You may change the size of the moveable surfaces but the outline of the aircraft must resemble the outline of the full-size. If in doubt, please provide 3-view drawings or official plans of the aircraft.

### **BASIC RULES:**

- Aircraft must weigh a minimum of 5.0-lbs. dry weight and no more than 8lbs. Plans or outlines with dimensions of the wing is required as proof of square inches. The wing must have a minimum of 475 sq inches and a minimum of 50" wingspan. Wing and fuselage must be proportional in size. Airfoil thickness shall be no less than 10% from the root and tip cords. Wing must have constant taper. (See formula below). If you have a kit that isn't stock, proof of these dimensions is required. Elliptical wings will be measured four inches from the outer most tip of the wing for the tip chord thickness.
- All aircraft must have retractable landing gear or fixed wire/plate gear in the locked down position. If aircraft has retractable landing gear, they must stay in a fixed down position and may not be retracted at any point of the race. You may tape or cover any and all holes to decrease drag on the wheel wells. Carriages, cradles, or hand launching are not permitted. All aircraft are required to have a tail wheel even if the full-size plane didn't. No tailskids allowed. No racing wheels allowed. Main wheels must be at least 1-1/2" tall and 1/2" constant wide. Fixed gear may use wire or plate landing gear struts.
- You cannot use any advanced building techniques such as hollow core vacuum-bagged composite wings, goop hinges or skin hinging. Standard knuckle hinges/ CA hinges must be used. ( Robart, C.G.,DUBRO or etc.... ) However additional materials can be added to allow strength to the structure of the aircraft as long as the exterior outline is not affected. Composite fuselages are allowed. You may add tape to the control surfaces to seal joints.

### **ENGINES ALLOWED:**

- Any side exhaust, front intake engine with a minimum displacement of .40cu.in. and a maximum displacement of .46 c.i is legal. Carburetors are required and must allow motor to idle with ease. Engines must idle a minimum of 4000 RPM for a 10 second period. Aircraft not meeting this will not be allowed to race. You may use any exhaust system of your choice be a special muffler or tuned pipe. Exhaust must be a minimum of 2 inches to be legal. You cannot use a Nelson, MB, Profi, Flora, Jett or and specific Q-500/QM-40 engines. You may use any performance pipes supplied by Nelson, MB Profi, Jett, Flora or any other performance-enhancing supplier. Engines may be modified and do not need to be stock.
- Any two bladed or three bladed propellers may be used. No single bladed props allowed. No Metal or variable pitch propellers allowed.
- No fuel restrictions. Only AMA legal fuel standards may be used. Bladder tanks or conventional tanks are allowed.

### **RADIO HOOKUP:**

- Radio hook-up is open with the exception: Servos must have at least 40oz. of torque if one servo is used. In the event two servos are used, a minimum of 25oz of torque is required per moveable surface. Minimum of a 600-mah-battery pack is required. Slip type linkages with setscrew may not be used on Ailerons or Elevator. Z-bend or solder linkages are the best suitable application for major control surfaces. All control linkages must have keepers.

**Examples** of Aircraft and Engines currently being used or that are legal. This list is just an example of what is being used and is not complete:

Aircraft:

Wing Manufacturing Kits

P-51D Mustang  
Machi 202 Folgore  
FW-190  
F4U Corsair  
Zero  
P-39 Aircobra  
P-40 Warhawk

Phoenix Models Kits

Strega

World Models Mfg

PT-26 Fairchild  
T-34 Mentor

The Wings Maker

PT-26 Fairchild

Black Horse Models

Spitfire

Personal Scratch Built Aircraft

Tsunami ( Modified Phoenix Models Strega )  
T-34 Mentor

Engines:

O.S. Engines .46FX  
O.S. Engines .46AX  
Tower Hobbies .46  
Super Tiger .45  
MDS .46  
Rossi 45

Exhaust Systems :

Performance Specialties Pipe  
Jett Pipe  
Mac Products Tuned Pipes  
Rossi Pipes

# RACE NUMBER DIAGRAM

## FUSELAGE NUMBERS-OPTION 1

3" NUMBERS ON FUSELAGE SIDE BETWEEN TRAILING EDGE OF WING AND LEADING EDGE OF TAIL ( BOTH SIDES )

## FUSELAGE NUMBERS-OPTION 2

3" NUMBERS ON RUDDER ( BOTH SIDES )

## BOTTOM OF WING NUMBERS

7" NUMBERS BOTTOM WING, HIGH OR LOW PANEL. MAKE SURE THAT FUSE IS POINTED IN SAME DIRECTION AS DRAWING.

