THE SLOW ROLL

JUNE 2014

CHARTERED #921
Since DEC. 1974

President—Frank Moskowitz
Vice President—Mike Peck
*Treasurer—Gene Peterson
Secretary—Jim McEwen
Editor—Bob Purdy K9JNB
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The Slow Roll is published by the Sun Valley Fliers by and for its membership to all others interested in the building and flying of radio control aircraft.

IMAA Chapter 782

Inside this issue: **Cover Photo by Joe Balabon of Tony Quist P-51**

THE PRESIDENTS CHANNEL

Frank Moskowitz

June 2014 Slow Roll Presidents Letter

Welcome to Junes Slow Roll.

Elections are over and for those of you that weren't in attendance at the election meeting in May; the results are as follows with new officers and board members in red: Our club officers; Frank Moskowitz – President, **Mike Peck – Vice President**, Gene Peterson – Acting Interim Treasurer, Jim McEwen – Secretary. Our Board Members; Charlie Beverson, Ron Thomas, Loren Counce, Eric Stevens, Mike Smith, Wayne Layne, **John Russell** and **Dan Bott**. I thank all of you that took the time to attend last month's election meeting to vote for your candidates and those of you that utilized our new online voting method. Ken Justice will remain as our safety officer. Let's make this year a productive one for our club. I always welcome comments so please feel free to call me anytime you want to chat about club related issues. You can always reach me at 602-809-4195. If I don't answer, please leave a message and I will get back with you. I can receive text messages on that number as well.

Summer is moving in fast, along with our record breaking triple digit temperatures. Make sure you protect yourself from those harmful summer rays. Use sun screen on exposed skin. You can still purchase hats from Ken Justice. For a list of apparel that SVF sells, go to our website www.sunvalleyfliers.com and click on the "SVF Apparel Prices" Link. It's located in the center of our web page under the Slow Roll link.

Our next meeting is Wednesday June 4th at 7:00 pm. Location is Deer Valley Airport Restaurant. (7th avenue and Deer Valley Road). Lots of great food to purchase. If you want to eat I suggest you arrive no later than 6:15 pm. The Club meetings get better every month. We will always have more than one raffle prize and the 50/50 could make you very happy $$$. You never know what might happen, and you don't want to miss it.

Have fun out there!

Frank Moskowitz

President

SVF MEETING JUNE 4 @ 7 PM

Sun Valley Fliers Club Meeting Minutes – 05/07/14

The meeting was called to order at 7:06pm by **Frank Moskowitz**. There were 39 people in attendance.

Frank introduced the executive and the board of directors in attendance.

Guests:

- None

New Members:

- None

New Solo Pilots:

- **Barry Mazur – see photo**
- **John Skarda**

Secretary's Report

- The minutes of the April meeting were accepted as published in the Slow Roll

Treasurer's Report - Gene Peterson

- Gene was not at the meeting. See his report in the Slow Roll.

Membership Director's Report – Mike Peck

- As of today 272 members including one who signed up tonight. A total of $ has been paid in dues. Additionally, $ has been contributed for field maintenance.

Safety Officer Report - Ken Justice/Frank Seminara

- Watch out for snakes and bees at SVF field, particularly at the gate.
- *See Ken for your SVF apparel needs*.

Old Business:

- Central Pilot Station – The board is still reviewing member comments and the CPS will be discussed at next week's board meeting.
- Bylaws are still on hold until everything is settled.

New Business:

- In accordance with 2014 administration schedule, we hold our elections tonight.
- There was a question from the floor asking why the Treasurer's position was not on the ballot. Frank responded with the following explanation:
  At the last board meeting, Gene announced that he wasn't running again for Treasurer. The position requires computer and accounting skills. Additionally, the candidate must be a known and trusted person (we have had problems in the past where someone has run off with the money). The board was unable to identify appropriate & interested person(s) prior to the election. Rather than leaving the position open to write-in's (where potentially only a couple of votes could elect a Treasurer), the board decided to not include the Treasurer's position on the ballot. Gene will continue taking care of the finances until a replacement can be found. The board will continue its search for a new Treasurer. If anyone is interested in this position, please let the board know.
- Many thanks to **Ken Justice** who set up electronic balloting through a 3rd party company on a secure website. There were 89 members who signed into the site and 86 people voted. Votes were tabulated and Ken had a report in one minute (at 5:01pm).
- **Tony Quist, Bob Weiman**, and **Ken Justice** counted the ballots cast during the meeting.
- **Election Results** (names of those elected appear in bold)
  President - **Frank Moskowitz**: 82, **VP** **Mike Peck**: 89, **Secretary** -**Jim McEwen**: 53, Lou Pfeifer: 39, Tony Quist: 6
  Board of Directors - **Charlie Beverson**: 86, **Loren Counce**: 83, **Dan Bott**: 61, **John Russell**: 63, Lou Pfeifer: 43
  76/84 people responding to the survey have been at the field in last 90 days.

Community Awareness – John Geyer

- John is attempting to organize a field day with the Boy Scouts.

Door Prize Winners:

- **Lou Roberts** –Epoxy, **Barry Mazur** - Ultra Stand, **Bob True** – CA & kicker, **Joe Keller** – Fuel, **Lou Pfeifer Sr** – Misc small items, **Bob Purdy** - CA & kicker, **Ed Klein** – CA & kicker
- **50/50 – Loren Counce**

Show & Tell: None

The meeting adjourned at 8:12 pm.

Respectfully submitted, *Jim McEwen* - Secretary

$ TREASURERS REPORT $ with Gene Peterson

Treasurer's Report June 2014

Not much going on for June, except maybe "do your flying early". Gets a little hot after noon. Bring lots of drinks with you.

Watch for snakes mostly when you go looking for a plane in the desert or some parts that came off. They are around. None have been reported in May I know of, but they still exist out there. Mostly they hang out in the wash over to the north west of the field. Bugs and varmints over there for "snake snacks"

No new members for the past couple months but we're hanging in about 269 total members. Howard Kennedy is off to Maine for the summer. We'll miss you Howard, and see you in the fall.

June General Membership Meeting is June 4th at the Deer Valley Airport Restaurant.

Happy Flying in June.

Regards Gene Peterson, Treasurer Az49er@cox.net 602-579-0925

JUNE 2014 SVF Birth Day Boys

First name	Last name	Member type	Dob
Loren	Counce, Jr.	Senior	06/04/1933
Philip	Mahoney	Inactive	06/05/1950
Kirk	Welch	Senior	06/05/1945
Tom	Perkins	Regular	06/06/1964
Jared	Simmons	Regular	06/07/1983
Keven	Resinger	Regular	06/09/1962
Lucky	Mitchell	Senior	06/10/1944
Peter	Dickinson	Regular	06/10/1954
Larry	Martin	Regular	06/10/1950
Jacob	Blank	Junior	06/11/2002
Rob	Keller	Regular	06/13/1969
W.	Georgelrwin	Senior	06/13/1946
Magne	Nerheim	Regular	06/13/1961
Richard	Wildey	Regular	06/14/1971
Allen	Casey	Senior	06/15/1940
Dennis	Carrier	Senior	06/15/1945
Brian	Ford	Regular	06/15/1970
Yuri	Higuchi	Regular	06/16/1969
Paul	Donovan	Senior	06/17/1932
William	Marhevka	Junior	06/19/1999
Joseph	Keller	Senior	06/20/1934
Robert	Whipple	Senior	06/24/1932
Willard	Wells	Senior	06/25/1947
Luke	Dicksion	Junior	06/27/1998
Robert	Campbell	Senior	06/27/1949
Louis	Pfeifer IV	Regular	06/28/1952

SVF *FLIGHTLINE SAFETY*

Welcome to the June 2014 **"*FLIGHTLINE SAFETY*"!** June 15th "officially" starts our "Monsoon Season". It'll be getting HOTTER and more HUMID (by Phoenix's standards) and it affects our body's ability to function properly…as well as our RC Aircraft and Helicopters' ability to fly compared to our cooler months of flying! This performance factor is called **Density Altitude** (DA and this doesn't mean the RC engine manufacturer). Simply stated… **Density altitude (DA) is defined as the pressure altitude corrected for non-standard temperature variations. And while this is a correct definition, my definition is perhaps more appropriate: DENSITY ALTITUDE IS THE ALTITUDE THE AIRPLANE THINKS IT IS AT, AND PERFORMS IN ACCORDANCE WITH THIS COMPUTED VALUE. Density altitude is basically a measure of actual altitude conditions you will be flying under with factors calculated that include mean sea level barometric air pressure, temperature, and dew point.** Full scale pilots are trained to be aware of this performance enhancing or degrading factor. Pilots are usually aware of this "flight factor"…most of the time. But there are a lot of "full-scale" aircraft performance issues and accidents attributed to this, especially out west in HOT, mountainous areas. The **lower the DA is, the better aircraft performance and flight characteristics will be.** Well, **a high DA will adversely affect our RC aircraft also**, especially if you have a marginally powered RC aircraft to start with! Even the high power to weight ratio 3-D aircraft can be affected! I was thinking about this a couple of weeks ago sitting around "hangar flying" in the shade under our covered Ramada with a few other RC and Full Scale pilots. A couple of RC aircraft had some "issues" when they came into land. Normally not an issue for these aircraft or pilots, but both had rather "hard" landings at speeds that they normally land at, resulting in some aircraft damage. The plane(s) just seemed to drop or quit flying before the pilot(s) normally thought they would, resulting in a hard landing(s)! They both made the comment "that they needed more speed" for their landing. But why, you might ask? The **HIGH DA was a contributing factor!!!** Our SVF field sits at approximately 1500 Feet MSL (mean sea level). However, when I calculated the density altitude for early morning flights, the DA was pushing 4700 feet compared to a typical winter morning of 900 feet! (yepper, below our actual field elevation thus giving greater performance in the winter!) There is a big difference in how this affects your RC aircraft performance, just like full-scale aircraft! So beware of this and adjust accordingly while flying in these hotter months. Adjust your speeds a little with higher take off and approach/landing speeds, along with other flight profile speeds to avoid that "mushy or mashed potato-feeling" flight controls and loss of control! If you have any questions about this, feel free to contact me anytime and we can discuss this issue! Here is a link to an online DA calculator http://wahiduddin.net/calc/calc_da.htm Try a couple of calculations of our "typical summer day" (altitude 1500', 105 degrees, 29.89 altimeter, 69 degree dew point) versus "typical winter day" (1500', 45 degrees, 29.99 altimeter, 12 degrees dew point) and reflect on how this affects your aircraft's performance!

Another quick topic…REVIEW the AMA Safety Rules and our SVF Field Rules. I have noticed a LOT of folks standing in between the safety fence openings, on the start pads at the edge of the net (and even on the rock/ weeds standing right up next to the safety net, not standing on the asphalt pilot area), while flying their aircraft! DO NOT do this guys and gals! DO NOT fly from the runway either. Remember, I don't make the rules but I am entrusted to educate and make members aware of unsafe practices. Please observe and operate your RC aircraft in all phases of flight with these safety rules in mind. We don't need attention drawn to our great club because of a reckless incident making the news. We all know the inherent dangers of our sport. Let's not push the envelope. And remember to call out your intentions. The last few times I've been out, there was little to no communications from one end of the flight line to the other amongst pilots while landing or taking off! Please try to land your aircraft along the centerline and north of it. This practice just allows for a little more safety buffer between your aircraft, the net and even other pilots. Just food for thought everyone!

That's it for this month! Stay hydrated and remember **"Safety Is An Attitude"** and…

Safety is everyone's responsibility!

Ken Justice

SVF Safety Officer

SVF's Solo Pilots, New Planes, New Cities

John Geyer presenting George Julovich with his Solo Certificate.

Barry Mazur Solo Certificate is presented to him by Lou Pfeifer IV

Dan Bott with his new 25% Extra 540 with an OS 33 gas motor

SVF Marty Jones and Cap't Jeff
Q; What town are they in? Q; 68,000 lbs of what?

Luke Martin & his new Decathlon

Sun Valley Fliers

Air Rage @SVF Field??

Having some fun here.

Sun Valley Fliers

Arizona World War II Army Airfields

Douglas Army Airfield

Construction began on Douglas Municipal Airport in June 1942 for the United States Army Air Forces. Land for the airfield was leased from several ranches by the United States Government from several ranches using War Emergency Powers and turned over to the War Department. Some 2,600 acres were set aside for military use.

Known as **Douglas Army Airfield**, the base included six operational runways, all over 7,000' in length. The runways included 17L-35R, 17R-35L, 8L-26R, 8R-26L, 3L-21R, 3R-21L, and 12-30. 16 taxiways, a parking apron, seven hangars were also constructed at the airfield. Improvements at the base included 418 buildings, sewage treatment facilities, associated utilities, including personnel barracks, warehouses, aircraft storage hangars, a commissary, civilian quarters, service clubs for officers and enlisted men, a small base hospital, as well as vehicular maintenance shops, recreational facilities, supply storage, specialty training, and ordnance buildings, an ordnance storage area, two firing ranges and a skeet range.

The ranges included a machine gun range with 10 targets, a pistol range with 24 targets, and a skeet range with two units. The General Site Plan for the air field lists storage for small arms, pyrotechnic, chemical bomb storage, assembly and maintenance, segregated storage and an underground magazine. Enlisted men used Douglas Air Field to complete the qualification course with the firing of a pistol, rifle, and sub-machine gun. They fired the .45 caliber automatic pistol at different distances and the .30 caliber rifle. They also fired the .45 caliber sub-machine gun at movable targets. Cadets fired these weapons at the pistol and machine gun ranges, and fired shotguns at the skeet range

In addition to the main base, five auxiliary airfields were constructed in the area for emergency and overflow use:

McNeal Field (Aux #1) 31°36′21″N 109°39′09″W
Forrest Field (Aux #2) 31°22′27″N 109°40′30″W
Webb Coutland (Elfrida) Field (Aux #3) 31°46′24″N 109°41′49″W
Hereford Army Airfield (Aux #5) 31°24′57″N 110°08′51″W
Records of Auxiliary Airfield #4 have been lost to time.

The Army activated the former Douglas Air Field on May 28, 1942, as a twin-engine advanced flying school for training bomber pilots. It was also used to train soldiers as post mechanics. Douglas Army Air Field was an advanced flying training school where aviation cadets received their pilot wings and commissions as second lieutenants or appointments as flight officers in the Army Air Force. The base came under the command of 83d Flying Training Wing (Advanced Twin-Engine), Army Air Forces Western Flying Training Command, headquartered at Santa Ana, California. Aircraft assigned to the base were BT-14's, AT-6's, UC-78's, AT-9's, AT-17's, and B-25's

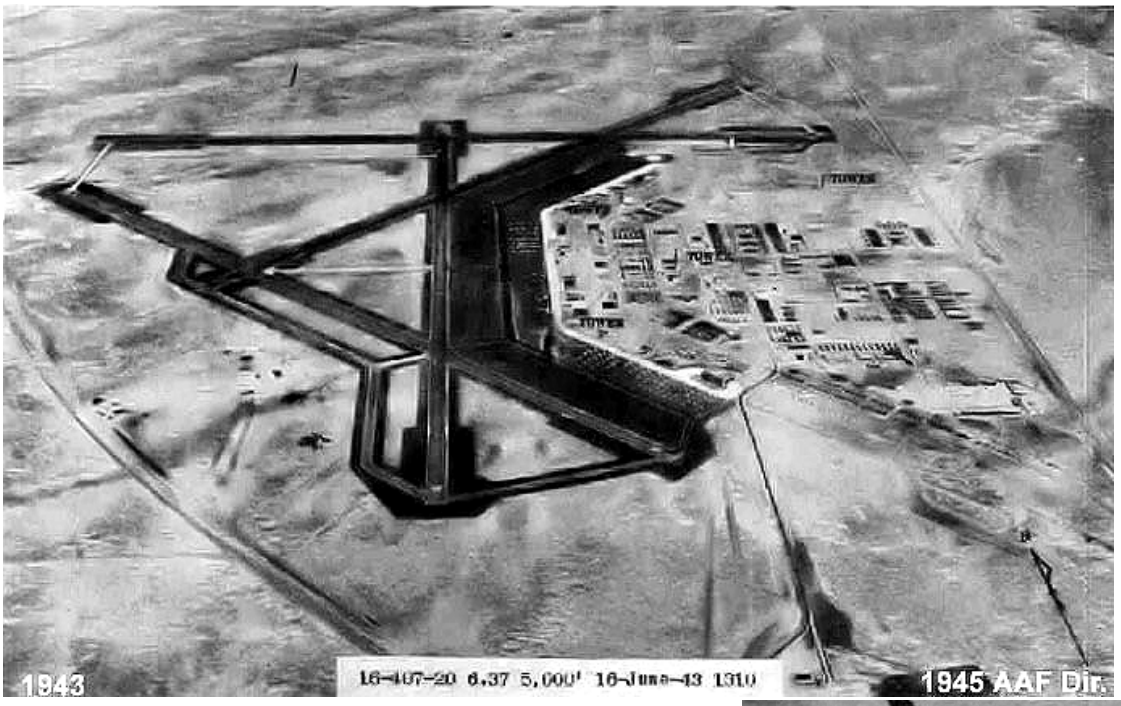
Graduates were then sent to III Bomber Command airfields in the southeast for group assignments on B-26 Marauder or B-25 Mitchell medium bombers, or twin-engined P-38 Lightning IV Fighter Command airfields along the West Coast. Others went to I Troop Carrier Command or Air Transport Command for transport pilot duty.

During World War II, there were about 5,500 troops stationed at Douglas at any one time. It was one of four Army Air Fields in the United States to have both African-American soldiers and WACs, and was the second air field to receive black WACs.

Pilots in Air Transport Command began training at Douglas in June 1944. These pilots ferried replacement planes around the world. In August 1944, B-25 bomber planes arrived at the former Douglas Air Field replacing the AT-17s and AT-9s.

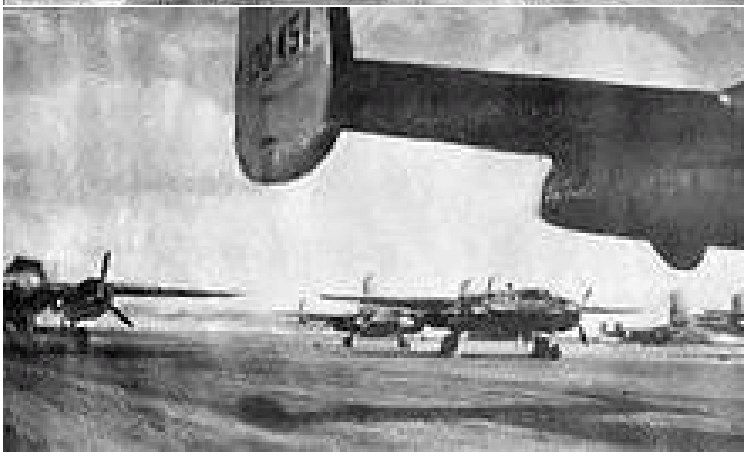
Chemical warfare training also occurred at Douglas Air Field. The only chemical warfare training conducted at the air field was carrying a gas mask. In a memorandum issued in 1943 it was stated that military training would include six hours of instruction in defense against chemical attack as well as the required arms qualifications. From 1943 to 1945, enlisted men, cadets, and Air Transport Command trainees attended various chemical warfare courses including incendiary and decontamination exercises. Quarterly gas chamber exercises were also conducted using tear gas and chlorine gas. In addition to the gas chamber training, the Chemical Warfare Section used several areas at the base for training and storage. They conducted decontamination demonstrations at one end of the Officers' Athletic Field. They used a warehouse in the Ordnance Area for segregation of supplies and ammunition.

The Air Training Command maintained the former Douglas Air Field on temporary inactive status starting on October 31, 1945. The site was declared surplus on April 25, 1947. Custody of the site was assumed by the War Assets Administration (WAA) on November 1, 1947. The WAA transferred ownership of 2,774 acres to Cochise County on May 13, 1949 by quitclaim deed. WAA Real Property classification documents dated April 8, 1948, indicated that the exchange agreement for acquisition of 31 acres was not complete. It is assumed that these 31 acres were leased from the State of Arizona and were returned upon declaring the site as surplus.



Cover of Class book for pilot class 43-B at the Army Advanced Flying School

Douglas C-45 Expeditor trainer, 1944



B-25s on the Douglas AAF parking apron, 1944

http://en.wikipedia.org/wiki/Douglas_Municipal_Airport_%28Arizona%29

SVF's At Lake Pleasant

SVF Sun Valley Fliers

Small-Block RC Gas Engine Guide — A New Generation of compact Power!

by Gerry Yarrish

Lately, there has been a noticeable shift toward smaller displacement single-cylinder, gasoline engines and there are now many of these little gas-burning powerhouses on the market. Years ago, when you talked about gas engines, the smaller end was owned by the 25cc engines and the average size was roughly between 40cc and 60cc with a few exceptions. Gasoline engines have also grown to monstrous sizes in the 150 and 200cc ranges with other multi-cylinders radials sporting 400cc. I guess it's only natural that smaller engines have come along to try and balance out the size spectrum.

Why use a small, "*20cc and under*" gasser? Well, there are several advantages. First, there are tons of 40 to 60 size sport planes out there and many of these smaller gas engines will easily slip into place with little effort. Gasoline engines are extremely fuel efficient compared to methanol/nitro powered engines and the cost per gallon for gasoline is also about a quarter as expensive as glow fuel. If that's not enough, Walbro-type pumper carburetors are very easy to adjust and maintain. And, with their electronic ignitions, gasoline engines are also very easy to start.

So what's not to like? Exactly! Here are some of the more popular "*20cc and Under*" gas powerhouses available today.

Hobbico/ O.S. GT15 Gasoline Engine

Featuring an IG-06 electronic ignition system compatible with 4-6 cell NiCd, NiMH or 2-cell LiPo and LiFe batteries, Beam style engine mounts, the GT15 Gasoline Engine is designed to fit cowls that are sized for 2-stroke.60-.91 and 4-stroke .90 glow engines The engine includes: E4040 Muffler, IG-06 Ignition Module, CM6 Spark Plug, 61H Carburetor, and Instruction Manual. Propeller range: 13×8-11, 14×8-10, 15×8

Displacement: 0.912 cu in
Bore: 1.091 in
Stroke: 0.976 in
Practical RPM: 2,000 – 11,000 RPM
Weight: 22.26oz (631g) engine
6.28oz (178g) muffler
3.35oz (95g) ignition module
Gasoline/Oil Mixture: 30:1 – 50:1 (25:1 recommended)
Plug Type: CM6
Price: $349.98

O.S. GT22 Gasoline Engine

Featuring a sturdy Beam mounting design the O.S. GT22 fits inside cowls sized for 2-stroke .60-.91 and 4-stroke 1.20 glow engines. It features a custom designed rear mounted Walbro carburetor with choke rod guide integrated into crankcase that minimizes set-up time. Also includes are IG-02 electronic ignition, (for 4-6 cell NiCd, NiMH or 2-cell LiPo and LiFe batteries,) a Pitts style muffler with reinforced mounting bolt holes and webbing at high stress points. Propeller range : 16×8, 16×10, 17×6, 17×8, 15×10 for break-in.

Displacement: 1.35 cu in
Bore: 1.26″
Stroke: 1.08″
Practical RPM Range: 1,800 – 9,000
Output: 2.66 hp @ 9,000 RPM
Engine weight: 26.86oz., Muffler: 4.68oz., Ignition Module: 3.7oz.
Price: $389.97

Horizon Hobby Evolution 10GX

Based on the proven 60NX glow engine, the Evolution 10GX is one of the smallest gas 2-stroke engines available. It fits into most traditional .46 – .60 mounting spaces with no special installation necessary. Uses a 5% oil mixture with gasoline and its 4.8–8.4V ignition case is half the size of traditional electronic ignition systems. The engine features a new carburetor system features a crankcase-pressure driven regulator system and a new cat's eye style fuel metering system for improved low and mid-range performance. Supplied muffler spark plug, ignition system and gasoline-grade fuel tubing and filters

Displacement: 0.59 cu. in.
Bore x Stroke: 0.94 in. 0.85 in.
HP: 1.68hp
Weight: 22.0 oz
RPM Range: 2,300 – 18,000
Rec'd Prop: 12×6
Prop Range: 10×6 – 13×8
Crankshaft Threads: 1/4-28
Plug Type: 1/4-32
Price: $199.99

Zenoah ZP 20cc

Known for their legendary reliability, the Zenoah engine line offers power to spare. Now outfitted with the ZP electronic ignition system, the ZP20 share many of the core components used in the magneto powered Zenoah G20. The ignition system can be powered with everything from a 4.8V NiCd or NiMH pack to a 7.4V 2S LiPo pack. No power regulators are required and the current draw only 450mAh so you'll be able to use smaller capacity battery packs to save weight. Key Features are aluminum carburetor arms for choke and throttle, Custom-machined grey-anodized prop drive, Lightweight muffler and spark plug included.

Benchmark Prop: APC 16 x 6 @ 9000 rpm
Displacement: 1.22ci.
Bore x Stroke: 1.26 in. 0.98 in.
Weight: 41.6 oz. (with muffler, ignition and mount)
RPM Range: 1,400–10,000
HP: 2.1 hp @ 9000 rpm
Prop Range: 15×8 – 16×8
Carb Type: Walbro
Crankshaft Threads: 8 x 1.25mm
$299.99

Hobbico/ DLE Engines DLE-20cc

This popular gasoline engine features two sealed crankshaft bearings, aluminum alloy crankcase with advanced CNC machining, a rear-mounted pumper carburetor, a fully automatic electronic ignition and a 2-year limited warranty. It features easy beam mounting to fit in the same engine mount as a comparable glow engines. Engine comes with: spark plug, ignition, muffler, muffler gasket, two 5x20mm muffler bolts and instruction manual.

Specifications

Displacement: 20cc (1.22ci)
Bore x Stroke: 1.3 x 1.0 in.
Weight: 28.9oz
Power: 2.5 HP
RPM Range: 1,900 – 9,000
Spark Plug: CM6
Carburetor: Rear-mounted pumper
Propellers: 14×10, 15×8, 16×6, 16×8, 17.6, 18×6
Price: $249.99

Valley View RC/ VVRC 20cc

Developed specially for Valley View RC, the VVRC 20cc has engine is one of the best engines on the market today. Valley View RC has ran several of these engines on their test stand and in the air powering several RC airplanes with no failures. The VVRC 20cc engine comes with a Rcexl ignition, NGK-CM-6 spark plug, a composite engine mount and long throttle and choke arms.

Displacement: 20cc
Bore: 1.3in
Stroke: 1.0in
Weight: 26.5oz
RPM Range: 1,650 – 9,000
Output: 2.5 hp @ 9,000RPM
Propellers: 14×10, 15×8, 16×6, 16×8, 17×6, 17×8
Price: $189.95

Hobby King/ RCG 20cc

With its easy starting characteristics and reliable low-maintenance running the RCG 20cc is an excellent engine. RCG engines have proven themselves the world over for quality and reliability.

Specifications

Displacement: 20cc
Bore/Stroke: 32mm x 25mm
Weight: 1,000g
Carburetor: Walbro
Prop Speed: 1,500 – 9,800rpm
Max power: 2.2hp
Propeller: 15×6
Ignition: DC-CDI (Electronic)
Power Supply: 4.8-6v
Price: $159.99

Evolution 15GX

The pilots of larger airplanes the 15GX offers the same great features of the 10GX in a larger engine for the .61- to .91 airplanes. Key Features include lightweight construction based on the Evolution91NX glow engine, outstanding power and performance, a 2S Li-Po battery compatible ignition without a voltage regulator for long run times, lightweight electronic ignition system and a reliable, easy-to-tune and efficient fuel system. It's standard beam mount makes installation effortless. Includes: muffler and muffler screws and gasket, spark plug, Evolution/Spektrum telemetry RPM adapter cable, medium gas- fuel tubing, in-line fuel filter, in-tank felt filter/clunk.

Specifications

Displacement: 0.91ci.
Bore x Stroke: 1.09 in x 0.98 in.
Weight: 31.1 oz
RPM Range: 1,600-13,000 rpm
Rec'd prop: 14×6
Prop Range: 13×7 to 15×6
Crankshaft Threads: 5/16-24
Spark Plug: 1/4-32
Price: $249.99

Evolution 20GX

Based on the Evolution 1.20NX glow engine, the 20GX 20cc is a small block gasoline engine designed for .90- to 1.20-size airplanes. It's has a standard beam mount and compact dimensions so it will fit anywhere you would use a .91- to 1.20 glow engine. It's also remarkably lightweight, even with the ignition system and battery. With the included 2S Li-Po ready electronic ignition and muffler pressure-regulated type carburetor, easy starts and tuning are a breeze. An in-cowl muffler is included as well as fuel tubing and filters that can handle gasoline.

Specifications

Displacement: 1.20ci.
Bore x Stroke: 1.20 in x 1.10 in
Weight: 33.6 oz (958 g)
RPM Range: 1,800-10,000
Rec'd Prop: 16×6
Prop Range: 15×6 to 17×8
Crankshaft Threads: 5/16-24
Plug Type: 1/4-32
Price: $ 279.99

Saito FG-17 (100) 4-Stroke

The popular Saito brand is continuing to expand its line of gasoline engine with the addition of the FG-17cc 4-stroke engine. The FG-17cc is a low operating-cost version of the tried and true Saito FA-100 glow 4-stroke, with the same performance. This new engine uses the latest Saito "pump carb" technology, inset valve seats as well as a new ignition system. The FG-17cc engine is ideal for any .60 size model or any model currently using the FA-100. Like all Saito engines, these powerhouses are engineered with that same Saito quality and reliability you've come to know.

Displacement: 1.05ci.
Type: 4-stroke
Bore x Stroke: 1.14in. x 1.02in.
Weight: 27.2 oz.
RPM Range: 2,000 – 9,500
Rec'd Prop: 15×6
Prop Range: 14 x 8 – 16 x 6
Carburetor: 2-needle Saito Gas Carb
Crankshaft Threads: 8 x 1.25mm
Spark Plug: 1/4-32, 4-Stroke
Price: $449.99

Saito FG-14C (82B) 4-Stroke

The smallest gasoline-powered 4-stroke engine on the market, the Saito FG-14C is the gas equivalent of the 82 AAC glow engine in terms of size and dimensions, yet it gives you the cleaner, lower-operating cost of gas with 14cc of power. Above and beyond the advantages of a 4-stroke gas engine, this is the engine for those who like to run clean and efficient engines. The engine comes with the Saito 4-stroke ignition module, Saito pump carburetor, muffler and engine mount.

Displacement: .82ci.
Type: 4-stroke
Bore x Stroke: 1.14 in. x 0.80 in.
Weight: 25.8oz. (with ignition)
RPM Range: 2,000–9,300
Recommended Prop: 14 x 6
Prop Range: 13×8–14×8
Carb Type: 2-needle Saito pump-type
Crankshaft Threads: M7 x 1mm
Price: $399.99

BP Hobbies/ CGF 20CC Version 3 (Rear – B Crank Case)

These powerful gas engines are known worldwide for their high quality, power and customer support. All engines come with prop adapter, muffler, motor standoff, spark plug, electronic CDI ignition and one year manufacturer's warranty. (Beam Mount Version also available.)

Displacement 20 cc
Bore x Stroke 1.25 x 1.02″
Carburetor Walbro
Ignition DC-CDI (Electronic)
Power Supply 4.8 – 6.0 V
Weight: 32.8 oz
Max Output 2.6 hp
Speed Range 1,500 – 9,800 rpm
Propeller(s) 15×6, 16×6
Bolt Size M4 – 4mm
Price: $235.95

RCGF / 15CC Version 2

Made by Zhejiang RCGF Model and Engine Co. These powerful gas engines are known worldwide for their high quality, power and customer support. All engines come with prop adapter, muffler, motor standoff, spark plug, electronic CDI ignition and one year manufacturer's warranty. (Beam Mount Version also available.)

Displacement 15 cc
Bore x Stroke 1.14 x 1.02 in.
Carburetor Walbro
Ignition DC-DCI (Electronic)
Power Supply 4.8 – 6.0 V
Weight: 29.1 oz
Max Output 2.1 hp
Speed Range 1,500 – 15,000 rpm
Propellers: 13 x 8 – 15 x 8
Prop Bolt Size M4 – 4mm
Price: $202.95

Today it's getting more and more difficult to find gasoline that does not contain some alcohol. While it will take some time and a lot of gas run through your engine before it will eventually affect performance, alcohol attracts water and moisture causes corrosion. It's now advisable to run your gas engine and fuel tank dry of fuel at the end of the day and use some after run oil. Marvel Mystery Oil is an excellent choice for after run treatments. Also, if your engine begins to become more difficult to start, check your inline fuel filter and your carburetor's internal fuel filter screen. If they show signs of becoming clogged, replace them with new ones. Walbro internal screens are available at most small engine repair shops.

Gasoline engines have always been the heartthrob of the giant scale set and they offer great performance and reliability. Adding their user-friendly traits and miserly fuel consumption to smaller airplanes is a great way to increase your RC hobby fun factor. Make the switch to gas and your .40 to .60 size sport plane and see the difference it makes!

7 Easy Steps for Starting Electronic Ignition Engines

For safety reasons we always recommend the use of an electric starter, but if you want to hand prop your engine to life, here's the best way to do it.

1. Make sure your flying buddy holds yours model so it can't move forward.
2. Position the propeller relative to the engine's compression stroke according to the instructions. Make sure the prop nut or bolts are properly tightened.
3. Turn the ignition kill switch off, and close the choke. To draw fuel into the carburetor, flip the prop until you see gas flowing through the fuel line and into the carburetor.
4. Open the throttle fully, turn on the ignition system but keep the choke closed.
5. Flip the prop again until you hear the engine "cough" indicating that your engine is properly primed. 6. Now, close the throttle, advance the throttle trim fully and open the choke.
7. Flip the propeller again and the engine should start. If not, switch the ignition off, and repeat the procedure.

Fuel Mixes

For most gas engines, a fuel mixture of between 30:1 and 50:1 will work while providing sufficient lubrication of its internal parts. If you are unsure which ratio to use, refer to the engine operation manual or check with the manufacturer. Here's some popular ratios recommended by engine manufacturers.

Ratio	**Oz./Gal.**				
100:1	**1.28 (Recommended only for synthetic oils)**				
64:1	**2**				
50:1	**2.5**	**40:1**	**3.2**	**32:1**	**4**

BIG BAD BRONCO

Without a doubt, our friends across the pond take giant-scale modeling seriously ... just take a look at this behemoth Bronco! With a 14-foot wingspan, this OV-10 was designed to use two Zenoah 62 gas engines. The giant was originally built by Tony Nijuis, and new owner Steve Holland flew it at the recent UK Blackbushe Air Show. It only takes Steve about 20 minutes to assemble the aircraft, and if you watch the video it's clear that he has it down to a science. This giant twin is impressive on the flightline and magnificent in the air; check it out!

VIDEO 15:21
http://www.youtube.com/watch?v=ywTo0aVbYC4&list=UUMQ5IpqQ9PoRKKJI2HkUxEw

BLOWJETS FIRST FLIGHT

Can an inflatable pool toy fly if it has the right propulsion system?

VIDEO 4:24
http://www.youtube.com/watch?v=lK_Wb0Jx-Bo

Dragon V2 Unveil

VIDEO 14:09
http://www.youtube.com/watch?v=FZJLAo6VRtA

After all the dust had settled at Top Gun this year, we had a chance to grab some of the contestants and get the backstory about their aircraft. One of the more interesting tales was that of the F4U Corsair flown by Dino DiGiorgio. This beautifully executed aircraft carrier based WW II fighter was all decked out in an unusual British Royal Navy scheme and if that weren't enough to stand out, this particular Top Gun aircraft started out as a severely crash-damaged airframe.

VIDEO 3:12
http://www.modelairplanenews.com/blog/2014/05/15/top-gun-video-interview-dino-digiorgio-f4u-corsair/

Aviation Insider: F-35 Lightning II

Is it striking out?

By Robert F. Dorr

When the 100th F-35 Lightning II Joint Strike Fighter was delivered on December 13, it was a “big deal for the Air Force,” said chief of staff Gen. Mark Welsh.

Welsh is the most visible face and the strongest voice supporting the F-35. A respected fighter pilot, Welsh is trying to steer his service at a time when funding is sparse and other options for the future of long-range, land-based airpower aren’t included in current policy. Welsh consistently rejects critics who argue that new-build or upgraded versions of the F-15 Eagle, F-16 Fighting Falcon and F/A-18 Super Hornet would make better economic sense than the F-35, which is the product of the costliest military acquisition in world history.

That may put Welsh at odds with Navy Capt. Francis Morley, program manager for the F/A-18, who told reports in December that the Super Hornet is a “no drama option.” Some say the F-35 program has produced more drama than results.

Welsh told reporters, “I am certainly not willing to go to my secretary or the secretary of defense or to the chairman [of the Joint Chiefs of Staff] and say, ‘I would recommend that we keep our old equipment and update it, and just accept more losses and count on the incredible ability of our aviators to win the fight anyway.’”

Welsh drank the Kool-Aid — Air Force talk for buying the official line — about the notion that fighters exist in generations and that the Air Force needs a “fifth-generation” fighter that employs stealth. Critics say the idea was a marketing tool devised by a planemaker and is meaningless: They argue that stealth is not important in modern warfare and that an F-35, just because it is newer, is not necessarily going to defeat a Gripen, a Typhoon, a Sukhoi Su-35, or an F-15SE Silent Eagle.

To the ordinary citizen, or even to an aviation insider who grew up in the ways of Washington, it’s difficult to reconcile the differing opinions of those who love the F-35 and those who criticize it. The bottom line, perhaps, is the question of how long we taxpayers ought, reasonably, to wait for the F-35 to demonstrate that it really is dual-role (air-to-air and air-to-surface), that it really is superior to even the most advanced of existing fighters, and that it will end up being worth the very high price the nation is paying for it.

Doing the dumb math

How much does the F-35 cost?

Under development are three versions, the conventional landing and takeoff (CTOL) F-35A for the Air Force and most overseas users, the short takeoff and landing (STOVL) F-35B for the Marine Corps, Britain and Italy, and the carrier-based F-35C for the Navy. The F-35B uses a lift-fan for vertical flight not found on other models. The F-35C is larger and heavier than the others and carries more fuel.

Forget about “then-year flyaway cost” or “net adjusted unit cost.”

This aviation insider uses dumb math. Take the total amount to be spent, $392 billion. Divide the total by the number of planes to be bought (2,443 including 1,763 for the Air Force). The solution is $160 million per airplane.

This is more than double the $75 million, as measured in 2013 dollars, quoted as the sticker price by Lorraine Martin, head of the F-35 program at Lockheed in a December statement. Note that both figures use calculations based on future events. Winslow Wheeler, analyst at the Project on Government Oversight, told *Flight Journal* that the planemaker’s figure is “absurd” and that F-35s being purchased in fiscal year 2014 will average $185 million each, with Navy F-35Cs costing $264 million each. “The actual cost of the F-35 in future years will become multiples of what its advocates have been saying,” Wheeler told this magazine.

By any measure, the F-35 costs more than any other fighter worldwide save the F-22 Raptor, which was

purchased on a small scale (187 aircraft) over many years.

The F-35 is a straightforward, tricycle-gear, twin-fin, single-engine fighter powered by a 28,000-pound thrust Pratt & Whitney afterburning F135-PW-100 two-stage turbofan engine. It has a 35-foot trapezoidal mid-wing (43 feet on the carrier-based F-35C) with a leading edge swept back at 33 degrees. It uses stealth coating to make it difficult to detect on radar. It may be difficult to see coming but it's easy to hear: a study at Eglin Air Force Base, Florida, where the 33rd Fighter Wing is training F-35 pilots, found the single-engine F-35A to be twice as loud as the twin-engine F-15C Eagle.

The pilot sits on a Martin Baker UF-16B version of the Mk. 16 ejection seat, a derivative of the seat employed on the Eurofighter Typhoon seat, rather than the ACES II model that is standard elsewhere in the U.S. military. The pilot uses a sidestick controller, like the one on the F-16, rather than a control stick.

The F-35A is supposed to be armed with an internal GAU-22/A four-barrel rotary 25-mm. cannon with a skimpy 182 rounds. The gun on the F-35B and F-35C is carried in an external pod — undermining the stealth properties that are the planes' principal selling point. In a January 6 interview, Col. Stephen "Jester" Jost of the 33rd wing told this magazine the gun is currently "not an authorized weapon." Developmental work on the gun has been stalled by technical glitches. Past attempts to develop a new cannon to replace the proven, Vietnam-era M61A2 Vulcan 20-mm weapon have not succeeded.

Carrying bombs or fuel tanks externally is another way to undermine stealth, so the F-35 has an internal weapons bay, much like a World War II bomber.

From its inception as a technology demonstrator program in 1989, the F-35 has always been intended to carry both conventional and nuclear munitions. In January, Welsh's predecessor, retired Gen. Norton Schwartz said the Pentagon should abandon its $350 million program to make the B61 hydrogen bomb compatible with the F-35. Funding to make the F-35 nuclear-capable should be diverted to a new bomber, Schwartz said.

Alone among fighters worldwide, the F-35 does not have a head-up display to enable the pilot to look out from the aircraft instead of down at the instrument panel. Instead, the aircraft relies on a helmet-mounted display system. In addition to allowing the pilot to keep his head up and see around the aircraft through external cameras, the binocular helmet display is designed to dispense with a need for separate night-vision goggles. Two years ago, Lockheed reported it was making progress fixing three problems with the display — impeded night-vision, latency, and jitter problems. More recently, plans for an alternate helmet display were dropped. An eventual improvement to the current helmet display will include new liquid crystal displays and software enhancements.

Really restricted

The F-35 program is moving ahead under an arrangement called "concurrency," in which the aircraft begins flight operations while undergoing tests. The 33rd wing at Eglin has begun training F-35 pilots, about four years later than planned. The 56th Fighter Wing at Luke Air Force Base, Arizona, was scheduled to receive its first F-35 in March 2014, to begin its role as the second Air Force Lightning II training base. But a Pentagon report released January 23 said that concurrency isn't working, that F-35 software is not yet mature enough for operations. In the report, the Pentagon's chief weapons tester, Michael Gilmore, called performance of the plane's software "unacceptable." The report said the F-35 is proving less reliable and harder to maintain than expected, and remains vulnerable to propellant fires sparked by missile strikes.

When I talked to F-35 pilots, they said the troubles dogging the program are exaggerated. Said Lockheed Martin test plot Bill "Gigs" Gigliotti: "The F-35 has a lot of power, handles well, is crisp in all axes, and is well behaved." There is "no doubt that this aircraft can overcome obstacles to becoming the premier dual-role fighter in the world," said Col. David Hlatky, a former 33rd wing commander. "I've never seen a pilot come back from his first sortie without a huge smile on his face." said Lt. Col. Matt Renbarger, a squadron commander in the 33rd wing.

So many alternatives have been sacrificed on the altar of the F-35 that we need to hope this isn't just the Kool-Aid. We need to hope this long-delayed, costly new fighter will succeed.

But let's not kid ourselves. As of now, the F-35 is limited to day flying under visual flight rules. The software isn't ready for an operational environment. The cannon doesn't work. The helmet display still has problems. The tailhook on the Navy version still has problems. And no matter how you finesse it, a single F-35 costs at least twice as much as an advanced F-15, F-16 or F/A-18.

My opinion is that the F-35 has had its chance and we need to explore other options.

Prop Balancing Made Easy

by John Reid

I have been often asked, “Do I need to balance my prop?” and the quick answer is always “Yes!” A properly balanced prop will give you more rpm from gas, glow and electric engines. A balanced prop will reduce the wear and tear on your aircraft by greatly reducing vibration, which leads to reducing premature failure to all the components and thereby giving your aircraft a longer life. You need to do it on every prop, every single one. There are several types of balancers on the market today that will do a great job of getting different size props balanced. No matter which you use, the balancing procedure will be the same for all.

1: HOLE SIZING

1

The first step is to enlarge the shaft hole to a size that fits your engine. If you balance the prop first, then enlarge the hole, you will have to come back and balance the prop again, so save some time by balancing afterward. The best way to do this is by using a good prop hand reamer because this will keep the hole concentric.

2

2: FINDING THE HEAVY BLADE

The second step is to place the prop on the balancer in the horizontal position to find out which side has the heavy blade.

3

3: REMOVING MATERIAL

Two methods are commonly used to balance the propeller. The first involves lightening the heavy blade until the propeller balances close to the horizontal position. Use a razor blade or sand paper to remove small amounts of material while rechecking the balance. Don’t forget to wipe off any dust or shavings before re-checking the balance.

4: ADDING MATERIAL

4

The second requires adding material, generally clear spray paint or thin CA glue with a little kicker to the lighter side of the blade until it balances in the horizontal position. You want to use a fast drying paint and wait until it is dry, because it will be a little lighter when dry. To speed up this drying process I use a blow dryer. Both ways will work well; I generally will remove material from fiberglass/nylon and carbon fiber blades, while using the addition method to the wood blades.

5: PRELIMINARY BALANCE

5

Once the heavy blade is identified and the prop balanced level or within five to 10 degrees in the horizontal plane you can move to the next step.

6: HUB BALANCING

6

Place the heavy blade down so the prop is sitting in a vertical position. Check to see which way the prop wants to drop towards horizontal, whichever way it drops, you will need to add some thick CA and kicker to the opposite side so that the prop can balance in the vertical position.

7: FINAL BALANCE

7

Now move the prop to any position and see if it stays there, if it does then you have a balanced prop. If not keep adjust the amount of CA on the hub by adding or sanding off (in case you over did it) until it does. You may also have to adjust the blade weight to fine-tune the balance.

8: MARKING THE BALANCED PROP

8

After the prop is balanced, put some type of mark on it so you know it is ready for flight. I use a felt-tip marker to write a “B” on the hub for balance.

CRAZY THINGS WITH RC AIRPLANES

Just a short note for SVF members who like guns and airplanes.

On May 10 I was invited out to Ben Avery shotgun range where I met up with George Ford owner and operates the GNAT WARFARE Corp. The company use radio control delta airplanes with small black powder charges to fly as aerial targets for the shooters to try and hit.

I met George and the crew at the range around 8 am. After some set up time for airplanes and launch equipment I tried my hand at shooting at the radio control targets and was surprised! " Not so easy mister". After a couple of rounds I finally hit the target a couple of times the black powder charge have a great display when hit "LOOK COOL" GREAT DAY OF FUN. I guess you could call it the E ticket for clay target shooting. I like to thank George and the crew for the opportunity to fill the air with lead.
Charlie Beverson

If you like to give it a try their phone # 480-267-8102 Web GNAT WARFARE

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Milton Caniff & The Art of War

By Rachel Morris

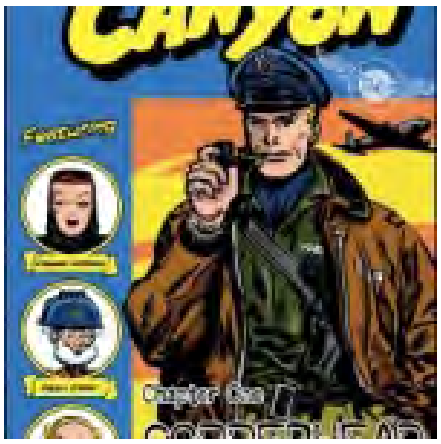
Milton Caniff never served in the military, but, his spirit was on virtually every battlefield of WW II. His artwork on the nose of fighters and bombers and in thousands of military papers touched those in combat in ways nothing else could. Born in 1907, Caniff moved from Ohio to New York in 1932 to pursue his career as a cartoonist. Two years later he found fame with adventure strip *Terry and the Pirates*, published daily by the *Chicago Tribune New York News* Syndicate. When WW II broke out, Caniff was deemed medically unfit for military service. Instead, the fiercely patriotic cartoonist used his artwork to raise the morale of U.S. troops, with his pen becoming a popular weapon in the Allied arsenal. The Syndicate owned all rights to *Terry and the Pirates*, so Caniff began producing a free version of the strip for military newspapers. First appearing in October 1942, within months it developed into a standalone story titled *Male Call*, featuring a cast of new characters. Thanks to the allure of voluptuous femme fatale Miss Lace, *Male Call* quickly became an enduring favorite. Lace was a natural progression from the Burma character in *Terry and the Pirates*, but where Burma was blonde with a hint of vice, Lace was brunette and, according to Caniff, “Innocent … but sexy as hell.”

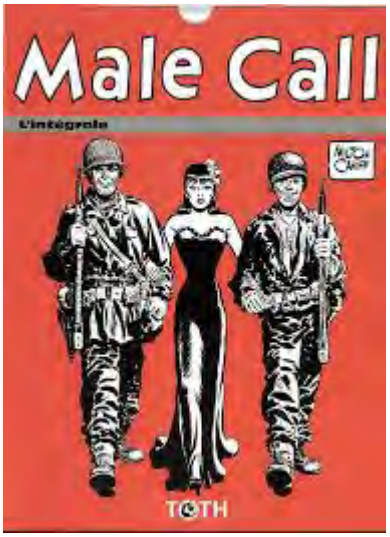
Intended to run for just one year, *Male Call* was soon published regularly in over 3,000 military papers. Caniff never received renumeration for *Male Call*, considering it his contribution to the war effort (he also donated a myriad of original illustrations to the military for use as pamphlets, posters, and unit insignias). Designed to appeal to the “forlorn fellow in a foxhole,” a 1944 survey showed *Male Call* as the troops’ most popular item — more eagerly anticipated than news from home. Although saucy, sexy and utterly risqué, Miss Lace was one of the guys, and *Male Call* frequently dealt with issues facing the average enlisted man. Caniff explained her lasting allure: “She’s seductive, but she never seduced anybody … the kind of gal that guys can make cracks to and she snaps right back … She’s a good sport.” A true friend to the forces, the soldiers looked forward to seeing the delectable Lace. She aided them through the long war years.

The army censors originally rejected history’s most enduring version of Lace, deeming it too suggestive for publication. The full-length reclining image would find its way onto the fuselage of numerous aircraft types. Most famously, she flew 83 missions on Boeing B-17G 42-97976 *A Bit-O-Lace*. PBY/OA-10A 44-33915’s artwork was yet another tribute to Lace and Plane Sailing’s *Miss Pick Up* now adds to a lengthy tradition of Caniff-inspired dames on tin.

Miss Lace made her final appearance in the March 1946 final edition of *Male Call*. Frustrated by the syndicate’s tight grip on rights, Caniff also walked away from the success of *Terry and the Pirates* that year to launch a new strip that he would own outright. In January 1947, *Steve Canyon* arrived on the shelves. Lead character Captain Canyon was a rugged but big-hearted veteran WW II pilot running a cargo airline. When the Korean War broke out, Canyon rejoined the Air Force, enabling Caniff to exercise his patriotic voice once more and further strengthen his ties with the USAF (formed in the same year Canyon was launched). In 1958, a television series was commissioned and by 1959, Canyon was appearing in over 600 publications. The strip continued until May 1988 when Caniff passed away, returning all of his remarkable characters to the ink pot forever.

Caniff received many awards for his art during his lifetime including the Air Force Exceptional Service Award, the highest honor given to a civilian. His unceasing patriotism was also recognized at his funeral, where he was afforded full military honors.





The Curtis C-46 Commando

The “Gooney Bird” wasn’t alone

By Steve Pace

The Classic C-46 Commando was originally marketed by the Curtiss-Wright Corporation as a pressurized 20-passenger “sub-stratosphere transport” for the masses but earned its stripes doing heavy lifting in WW II.

Curtiss-Wright Corporation designed and built its proposed CW-20T twin-engine passenger airliner as an advanced higher-flying, larger-capacity alternative to the Douglas DC-3. The CW-20 was designed by chief engineer George A. Page, Jr. in 1937 with a full-scale wooden mockup. The entire left side of the mockup was omitted to show the cockpit and passenger cabin seating arrangements. A number of airlines showed interest in the CW-20T design, and some 25 letters of intent were signed but no orders were forthcoming.

The CW-20T prototype rolled out of the factory in February 1940 to be prepared for flight testing. The prototype was the largest and heaviest twin-engine transport in the world at the time, powered by a pair of 1,600-horsepower Wright air-cooled R-2600 Cyclone radial engines. A successful first flight out of Lambert Field was completed on March 26, 1940. Its pilot was the legendary Edmund Turney “Eddie” Allen who also made the first flights on the Lockheed Constellation and Boeing Superfortress among numerous other classic aircraft. Allen’s copilot was Dean Cullen Smith who was in management with American Airlines at the time, and who had piloted the Ford trimotor during the Byrd Expedition to the South Pole during the 1928-1930 period.

The CW-20T prototype (civil registration NX19436) featured a twin-tailed design with a pair of small vertical stabilizers and rudders at either end of its horizontal stabilizer. It was publicly announced on April 11, 1940 as the “Sub-Stratosphere Transport.” Eddie Allen, a highly respected and sought-after freelance engineering test pilot, indicated that a third tail on centerline or a single tail with more area would be best for the airplane. Therefore, its twin-tailed empennage was replaced with a single tail and its overall stability at low speeds was much improved.

Thus the one-of-a-kind twin-tailed CW-20T (the T suffix meaning Transport) was converted to the single-tail CW-20A and was procured by the USAAC as the C-55-CS for evaluation.

Air Corps commander Henry H. “Hap” Arnold took the closest look at the C-55 airplane in mid-1941, and by his request it was ordered into production on a limited basis at first but in larger numbers soon after. In the interim, the C-55 designation had reverted to C-46 and the type was officially named Commando. In actuality, it was the C-55 that served as the prototype for the C-46 as no XC-46 was built.

On the 13th of September 1940, the AAC approved contract number AC15785 for 46 CW-20Bs (25 C-46-CUs and 21 C-46A-1-CUs) to be built at the Buffalo, New York, Division of the Curtiss-Wright Corporation. The initial order for the type was followed by numerous others to total 3,181 Commandos — far less than its twin-engine rival, the Douglas C-47 Skytrain — but it was a significant amount nonetheless. They were all manufactured in Buffalo and St. Louis — the first C-46-CU example (USAAF serial number 41-5159) rolled out in Buffalo on July 10, 1942, was delivered two days later, and made its first flight shortly thereafter.

To summarize, the Curtiss C-46 Commando was extensively used in the China-Burma-India Theater of Operations in World War II — famed for the thousands of deliveries of cargo they made while flying dangerous missions over “The Hump” between India and China. The U.S. Navy procured 160 Commandos for use by the U.S. Marine Corps, designated R5C-1. The C-46 also served in the Korean War and for a short time in the Vietnam War before it was retired in 1968.

VIDEOS and Websites Links

Click on to view video, website

Airbus Group Inovations—E-Ffan 4:54
http://www.youtube.com/watch?v=qfBfZJBQH_I&app=desktop

Are you a Golfer? :52
http://www.youtube.com/embed/XRIzE_xMqMI

Giant Rc Curtis P-40 WARHAWK 3:13
http://www.youtube.com/watch?v=3Tgc1k_Xl0Y&list=UU1QF2Z_FyZTRpr9GSWRoxrA

Crosswind Landings from Birmingham, England 11:02

http://flightclub.jalopnik.com/watch-these-seat-soiling-crosswind-operations-from-birm-1541878105

Duxford Airshow 2:36

http://player.vimeo.com/video/93587997

P-38 & Corsair 12:52

https://www.youtube.com/watch?v=6McV4L_K7xA

Joe Nall 4:46

http://www.youtube.com/watch?v=P-3-RkfUUn4#t=187

Joe Nall 2:56

http://www.youtube.com/watch?v=MVDEGw-us6o

Joe Nall 2:27

http://www.youtube.com/watch?v=4XCSZnPH-m8#t=105

Joe Nall 2:18

http://www.youtube.com/watch?v=kc2fedRZ3RQ

**** New Items ****

SVF Website Buy & Sell items.

http://www.sunvalleyfliers.com/classifieds/classifieds.htm

My thanks to those who passed this info on.

This Month Issue *6-2014*

AZ airfields new this month. Read about Gas engines,-46, F-35 & PRROP BALANCING. Check out the Videos. ***GOOD stuff in this issue, MORE photos, so enjoy!*** **Send those articles and photos in and for the SVF HALL of PLANES.!** *Remember to* ***ZOOM*** *the* ***PDF*** *page to see more.* **We need your NEW projects to put in the *SR* SVF HALL OF PLANES.**

Next month Issue

Have no idea what next month will bring. DO SEND your PHOTOS in early. Sunscreen handy? Thank you.

Would you like to be notified when the SLOW ROLL new issue is available? Give Gene your e-mail address.
AZ49ER@COX.NET

Hope you will enjoy it. Bob
rcbobsvf@aol.com

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