

THE AVIATOR

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“FLIGHT SIMULATION FOR THE 21ST CENTURY”

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THE AVIATOR

T H E A V I A T O R S O C I E T Y

ARTICLE CONTEST!

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Have you ever been told you have a knack for writing? Have you ever wanted to be published in a magazine? Well the Aviator is making it happen for some and here is your chance to do just that and win a little something in the process. "The Aviator" is holding a competition for the best Flight Sim article. The author of the winning article of the competition will receive a \$15 (US) gift certificate for Flight-Sim.com's Pilot Shop plus their article will be featured inside the May/June edition of "The Aviator". There are a few

restrictions that apply (as there normally are). The contest article submission must be at least 750 words. Any pictures or artwork that you submit along with the article (good idea) must be sent as separate files (jpeg/bmp) and be royalty/copyright free. The Aviator claims no liability or responsibility towards plagiarism or misuse of other's material by the individual that submits the article. If selected the article that you submit becomes publishing property of "The Aviator" and can not be republished anywhere else without the written per-

mission of "The Aviator" staff. All submissions must be submitted and received no later than April 10th 2007. Please send all article submissions and questions concerning this contest to editor@aviatorsociety.com.



FROM THE EDITOR



With spring approaching the skies are going to get busy...both Real and Virtual. As the weather starts to warm up, aviators want to experience the thrill of aviation. However in most cases spring brings lots of rain and unpredictable weather with it so flying for

real becomes less easy to accomplish. That is where your Flight Simulator comes in. Rain or Shine your Flight Sim is sitting there ready to be flown...and best of all....you don't have a rental fee! No matter what the price of fuel is or what your instructor's schedule

is like you can always count on flying virtual! If you find your self grounded and still want some aviation then you can always enjoy an issue of "The Aviator". From the staff here at "The Aviator" we remind you to be safe in the air both Real and Virtual!

THE OUTER MARKER

“LOVING THE GPSEX”

By: Chip Barber

Sorry about the Sex thing, but you have to admit, it's an eye catcher.

Rather than a tryst with The Boss, I'm talking all things GPS. Now, this is a rather broad (pun intended, unless you think it's awful, then not so much) brush with which to be painting, but bare (there's another – just rolling this morning!) with me.

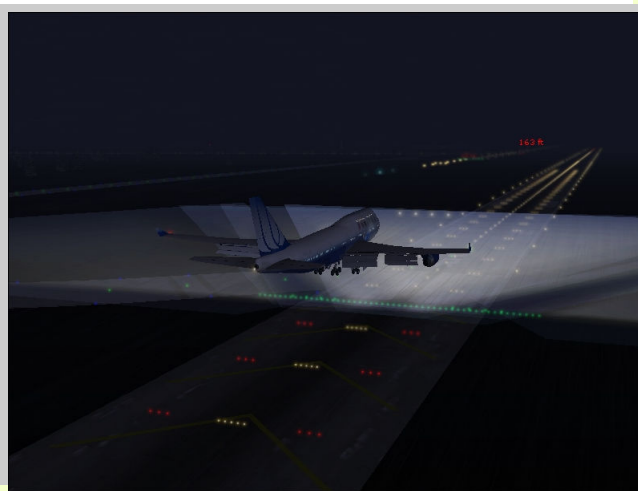
I've had something of an epiphany. I think there is something within the human experience that causes us, in one fashion or another, to come full circle. Now, I've been waxing poetic ad nauseum about my beloved iron sims. The reason, quite simply, is that I busted my butt to learn how to use them more or less appropriately (mostly less than more, but it *is* only a hobby). I have invested a tremendous amount of time, money and energy getting myself up to speed, so that I can go cold and dark through shut down, and not bend anything or make any of my passengers upchuck. And the really great thing about the entire experience is the effort I put into it. There are few things (see above for one of them...) better than seeing an awful lot of effort return in the form of results.

But here's the funny part. I've become more or less comfy with the iron. PMDG, FeelThere, Phoenix Simulation Software, blah blah blah. We all know the names of the major players in our hobby. Apologies to those I've omitted, but when one is typing with a puppy on his lap, and said puppy starts to get antsy with that certain look, it's a matter of finishing the sentence or going to the piddle pads. I choose the pads every time.

So it's a matter of comfort. Sure, the Super-Sims are very complex. Many of them boast their efficacy in being an adjunct training tool for you real flyboys (I heard that derisive

chuckle – it's Pac Man for you). But virtually anyone, with sufficient effort and time, will learn the systems and procedures eventually. Putting it all together in a successful flight is cause for FS Celebration. But, like anything else, after a time, it begins to get shall we say, routine. This is a good thing for you Real World guys/gals. No-one wants to see their pilots giving one another a high-five when they deplane. While it may be heartfelt and well deserved, it hardly inspires confidence in the flying public when their pilots celebrate a successful flight. We'd much rather see the pilots look like we do after a hard days work.

FSDoldrums. How many flights does it take in a Boeing or an Airbus until, from the flight simming perspective, it begins to feel like work? This, my friends, is when its time to



find alternatives. And this is where the GPS comes in.

I like programming the FMC in all its various glory. It vexed me for years, until I found a publication that put it all in terms I could understand (thanks Mike Ray!). And while I don't consider myself an expert, I can enter all relevant information while listening to some of my favorite music. No more knitted brows, beads of sweat born of concentration

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and effort dripping onto the keyboard. I meet the FMC with disdain, entering information with one hand on the wheel, smiling and winking at the flight attendants. And boy, that can get old while sitting in front of a monitor!

So I've gone back to square one. I've been flying the C172 in FSX. In all fairness, I have been using the FS2Crew addon with it, but I'm finding it is rather like going back to one's roots. The scenery really is quite good in FSX.

And let me tell you, flying the iron at FL360 really takes away from all that payware mesh and scenery. Considering the magnitude of my investment, it's about time I've come to really appreciate all that eye candy outside the digiglass! There is much to be said for the low and slow approach to flight simulation.

There is one part of FS that continues to vex me. I to this day cannot figure out how to use the instruments to navigate from VOR to VOR. Moving the pointers, watching the line thingy, going to/from. Like Mason said to Dixon, we've gotta draw the line somewhere. For me, instrument navigation is the line. Enter the GPS.

Being the inquisitive soul that I am, and finding myself with an hour or two to kill, I downloaded a program that teaches one about the FS default GPS. You may laugh, but you'd be surprised just how much navigation may be accomplished with this neat little piece of software. Take a little bit deeper look at the thing, and you may be surprised at its ability to fly approaches like DME arcs, NDB approaches and the like. Yes, it can.

And of course, being one who is never quite satisfied, I revisited the RealityXP Garmin

530. The blue blooded big brother of the default GPS, this unit most certainly has a learning curve that gives the FMC a run for its money.

I've also purchased a couple of payware GA birds; the Digital Aviation Piper Cheyenne and the Eaglesoft Columbia 400. I like putting my name and my VAA_019 on the fuselage of these birds. Then combining them with the spiffy payware GPS, man I am in



the cat bird seat!

So like I said, I believe I've come full circle, and perhaps then some. I'm biding my time in the world of General Aviation, using default and payware birds with default and payware navigation, and not only learning a thing or two about GA navigation, but really appreciating what has been created for us in the FS world.

Now this is what I call a hobby!

Three Green!





WestCoastATC.com is a premier aviation community providing a wide array of online aviation services to our members that enjoy flying online with Microsoft's Flight Simulator 2002 and 2004. Our online pilot and controller two way voice communication is handled over TeamSpeak's voice over IP software, adding to the full depth and exposure by today's aviation standards. Bringing our pilots through an immersive experience is one of our fundamental goals.

WestCoastATC.com began providing services to its members, December of 2002. Our site and infrastructure today represents about forty percent completion of the master plan and over all vision. We're the only place online where you'll find top of the line Fiber Optic OC connected gaming servers delivering pure raw excitement, running in tandem with high speed private servers in a redundant backbone infrastructure. With servers open seven days a week twenty-four hours a day, providing our members a full time aviation environment. Planning for the future today, so our members have a home tomorrow.



AIR ADVENTURE

A TRIP TO DISNEYWORLD

By: Jeff Taylor

Well, it's spring time which means "Spring Break. Let's join the other snowbirds on a trip to Florida. Since the kids are out of school, we have to make it someplace cool. Guess that means Orlando and the Walt Disney World Resort Complex. This air adventure will create/recreate an 8 day 7 night stay in the land of Mickey. Get your bags packed. It can be a long vacation.

Saturday March 17 we wake up early to catch American flight 1770, a Boeing 757-200 departing KDFW at 6:40am. Getting the kids out of bed wasn't hard when we finally told them where we were going to be in 5 hours. To the delight of everyone, there was no fighting while getting ready at the house or in the car ride to the airport. Heck, we were even early. Traffic was non existent. Upon arrival into the airport and checking our bags we see it. Yep you guessed it. The Security Check Point stand manned by those glorified Rent-a-Cops, the TSA. You know what TSA stands for right? Thousands Standing Around. Well, luckily it was only hundreds this morning. After removing the shoes and the full body cavity searches we finally make it down to gate C24 and see that beautiful Silver Bird waiting for us patiently at the gate.

The real and virtual flight will be at flight level 370 and consist of the Dallas Seven departure to the SWB (Sawbill) vor then MCB (McComb) CEW (Crestview) to OTK (Valdosta) for the Leese One Arrival into KMCO. Flight time is estimated to be roughly 1 hour and 58 minutes. Since we

have time to spare (just barely, thank you TSA) it's a quick run to McDonalds. The fine folks there provide an excellent breakfast. Egg McMuffins are the best!



ATIS info Juliet for DFW right now. Winds show 178 @ 8kts so it will be a departure on 17R. Light clouds in the area will make for a pretty sunrise and a great morning of flying. Bags are stowed, seatbelts are fastened and then the Flight Attendants do their safety spiel. Push back is on time and we taxi out to the runway. Tower clears us for take off and we accelerate down the runway. A left turn for Clare intersection and it is Disney World, here we come. Climbing through 10,000 feet, we are allowed to pull out our portable electronic devices. The kids (and author included) pop in DVD's to watch. To get into the spirit of the week to come, the kids watch Cars and your's truly watches the great Disney DVD Planner. (Order yours from www.disneyworld.com) It is a free disc and is packed with some incredible footage and great information about the

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parks. Over MCB vor then to CEW we can see the sun glistening off the Gulf of Mexico. Occasionally we see contrails of other aircraft heading to who knows where. There is nothing better than watching another airliner while flying. 40 Minutes later we have begun our decent into MCO. Active Sky 6 indicates winds at MCO are 196 @ 12kts with scattered clouds at 12500. Looks like another landing to the south.

The flight attendants make their announcements to bring our seatbacks to their full upright position, return all carryon luggage into the overheads or under the seat in front of us plus stow the tray tables and turn off all our electronic devices. Lining up for 18R we strain our eyes in the direction of Disney but alas, we cannot see it. Captain Kangaroo bounces the landing and then brings us to a screeching halt at gate 16. As we gather our belongings, we say goodbye to the crew and head for the train. Upon entering the train, we hear that familiar voice.



Believe it or not, the same person does the MCO train and the Disney Monorails. The whole family smiles.

The nice thing about booking this trip is



that we booked through Disney and we get "Magical Express". Magical Express means that we get free transport to and from the resort via motor-coach and we won't have to deal with our luggage. When we checked it at DFW, we put special tags on it. Once it arrives into MCO, Disney representatives take it from the secured area of the airport and transport it directly to your room. This happens usually within 3-4 hours after the flight has landed. Good thing we have a couple of carryon's for the necessities. Magical Express is really a great service but sometimes it can be a "cattle-car" during certain times of the day. Unfortunately from 9:00 AM – 12:00 PM is their busiest time frame. As we approach the queue area we are arriving with 500 of

our favorite traveling companions. Luckily Disney has written the book on line management and within 10 minutes, we are on the bus heading to our resort.

You can stay offsite and save a little bit, but to truly

experience the Pixie Dust and Magic, I would suggest staying onsite. The hotels are set up in different classes: Value, Moderate and Deluxe. Value Resorts such as

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Pop Century and the All-Stars (Sports, Music and Movies) offer onsite at a very reasonable price. Moderates such as Caribbean Beach Resort, Coronado Springs and Port Orleans (Riverside and French Quarter) provide slightly larger rooms are my usual choice. Deluxe resorts include Wilderness Lodge, Boardwalk Inn, Beach and Yacht Clubs, Animal Kingdom Lodge as well as all the Monorail Resorts (Grand Floridian, Polynesian and Contemporary). The more you pay, the more you receive in way of room and amenities. Each resort has transportation to and from the parks in the form of the Monorail, Bus and Water Craft and they are complimentary to all guests. We usually depend on the resort transportation but if you decide to drive your own or rent a car, parking is free as long as you are an onsite guest.



Magic Kingdom

Rather than list out daily activities on this air adventure, I thought I would share highlights of each park and some other activities you can see and do while staying in Mouseland. I tried to capture everything, but obviously, there is no way to do all of that without wiping out the Amazon Rain Forest.

Spread out over 49 square miles about 20 miles west of the Orlando International Airport MCO, it has everything anyone could want, and more. From great food, fantastic resort hotels to unbelievable attractions, Disney World should be on everyone's trip list at least once. The four theme parks are the main reason people travel to Disney World. Listed in order of opening days they are: Magic Kingdom, Epcot, Disney MGM Studios, and finally Animal Kingdom. Each park is a site to see and well worth the price of admission.

The Magic Kingdom is very similar to Disneyland in California except the Magic Kingdom is bigger. In fact, Disneyland, CA could fit inside the parking lot of the Magic Kingdom. MK as it is known in my family has something for everyone and is truly Disney at its best! Take a ride on each of the mountains: Big Thunder and Splash Mountains in Frontierland and Space Mountain in Tomorrowland. Each of them will have you wanting to get back in line to do again. Relax on a Jungle Cruise in Adventureland and then avoid the cannon fire on Pirates of the Caribbean, Next Doombuggy your way through the Haunted Mansion in Liberty Square. Ride Dumbo through the air and soar on Peter Pan Flight through Fantasyland. Continuing with the flight theme catch a quick hop with Captain Goofy on Goofy's Barnstormer. One of my favorite attractions that is often overlooked is the Tomorrowland Transit Authority or TTA. The TTA takes riders on an 8 minute loop through

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the entire Tomorrowland area. See Walt Disney's vision of the future (EPCOT), watch the racers on the Tomorrowland Indy Speedway, the inside of Space Mountain and Buzz Lightyear Space Ranger Spin on this journey. Top the night off with the Spectromagic parade and then one of the most breathtaking fireworks displays ever seen, Wishes! Set to music from Disney Classics with Cinderella's Castle in the background, this extravaganza is a must see. (Warning, after viewing this, your local fireworks display will be a MAJOR letdown).



EPCOT

This park was Walt Disney's vision of the future. Epcot stands for Experimental Prototype Community Of Tomorrow and was opened to the public in 1982. This is really two different parks in one, Future World and World Showcase. Future World is located in the northern portion of this park and is broken up into two sections, Innoventions East and West. On the east side you can experience two different modes of transportation.

Test Track, which is Disney's fastest and longest ride, allows guests to challenge a car's suspension, breaking action, turning and high speed acceleration. Mission: Space simulates a rocket launch and zero G space flight ending with a tricky approach to a Mars landing site. This attraction is so intense that air-sickness bags are provided. The west side gives you a journey through The Land and Soarin. Soarin is a virtual hang glider that provides the sights and smells of the California landscape including pine trees along a river,

orange groves and El Capitan in Yosemite National Park. Be sure to look for the hidden Mickey. Centered between Innoventions East and West is Spaceship Earth. The signature attraction of Epcot, which is in the shape of Geodesic Sphere, hosts a ride that takes us on a journey through time to see how communication has changed our lives. World Showcase features the culture and cuisine of eleven countries: Mexico, Norway, China, Germany, USA, Italy, Japan, Morocco, France, United Kingdom and Canada. Several of the countries offer films and attractions. Think of World Showcase as a Worlds Fair that never ends. Over the World Showcase Lagoon, the night sky

erupts with fireworks, laser, lights and water all choreographed to music with Illuminations, Reflections of Earth. This is another must see display which draws a big crowd.

Disney MGM Studios

Disney MGM Studios pays tribute to the Hollywood we all thought was there but really wasn't. Tower of Terror takes riders on elevator plunges faster than normal

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gravity. This attraction is so sophisticated and complex that you never have the same ride twice. Will it be 2 drops then a stop, 3 quick drops, a quick accent followed by another drop or something else? You never know. Simply the best ride in the Walt Disney World Resort area. Rock "n" Rollercoaster right next door blares Aerosmith in a super-stretch limo and blasts down the turnpike at 60 mph. Most of us have probably wondered what it feels like to be launched off an aircraft carrier. Well this ride is a little slower but the launch is INCREDIBLE. Watch stunt shows like Indiana Jones and Lights, Motors, Action! Fly

through space with Captain Rex in Star Tours. There are other shows to see such as the 3D adventure Muppet Vision-3D, Beauty and the Beast Stage Show, Voyage of the Little Mermaid and for the little kiddos Playhouse Disney Live on Stage! Be sure to catch Fantasmic, the nightly attraction that pits Mickey Mouse against all the villains from Disney Classics. This is a perfect way to end the night.

Animal Kingdom

Animal Kingdom is the largest of the four Disney World Resort parks. Animal Kingdom is so large that each of the other parks com-

bined could fit inside its borders. Many people mistakenly think this is Disney's version of a zoo, but it's so much more. Disney's newest ride is here, Expedition Everest. This ride is a scale model of the world's tallest mountain, Mount Everest. Riders hop into a train and go forwards and backwards up the side and down the insides, while looking for the mythical beast, protector of the mountain, the Yeti. You can also take a ride on Kilimanjaro Safari to see all types of live wild animals in a replica of the African Plains. Go rafting down the Kali River Rapids or go back in time aboard Dinosaur to save the last dinosaurs



from extinction. Head over to Rafiki's Planet Watch to see how we care for animals and to learn conservation tips. There is also the Affection Station where you can see rare, domesticated breeds from across the globe. The Signature Structure of Animal Kingdom is the Tree of Life. This massive structure is actually an offshore oil derrick that has on its massive trunk all types of animals etched into the "bark". Inside you can join Flick and some of his insect friends in the 3D Adventure It's Tough To Be A Bug. There are no nighttime shows at this park.

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Something for Everyone

There are other things to see and do while visiting the Walt Disney World Complex. Disney's water parks are a lot of fun to explore. Blizzard Beach boasts Summit Plummet, a 40 mph wedge machine. This slide is one of the worlds tallest and fastest. At Typhoon Lagoon you can learn to surf the waves. Every 70 seconds or so, a perfect wave is sent out that you can ride to shore. You can even swim with the sharks. At Downtown Disney, Shop at the world's largest Disney store, World of Disney, as well as other Disney specialty shops in the Marketplace. Over at the Westside, check out Cirque de Soleil La Nouba, Disney Quest Indoor Theme Park and eat dinner at the House of Blues or Bongos Cuban Café. In between you can party the night away at one of the many clubs located on Pleasure Island. For the golfers, there are 99 holes to play. Disney's Palm and Magnolia courses are home to the PGA Tour's Funai Classic held each October and are located close to the Grand Floridian Hotel and the Magic Kingdom. Other courses Eagle Pines and Osprey Ridge located between Fort Wilderness Resort and the Port Orleans resorts. The Lake Buena Vista Course is the oldest and meanders its way through the Old Key West Resort area. There is also a 9-hole walking course called Oak Trail which is right next to Magnolia and Palm. For those that are inclined there are magnificent Spas available to resort guest. My wife (and checkbook) tells me that the Grand Floridian is the best.

Don't forget to check out the Boardwalk area located between Disney MGM Studios and Epcot. Close by are several onsite hotels such as the Swan and Dolphin, Boardwalk Villas, and Beach Club. Stroll the wooden deck and stop in at Jelly Rolls. You can also rent surrey bikes. Sports fans will love early spring and late summer at the Wide World of Sports Complex. Spring time brings out the Atlanta Braves for pre-season workouts and games. Late summer the Tampa Bay Buccaneers take over the complex for their training camp.

When To Go

While any time is a great time to go to Walt Disney World, there are certain times of the year when the resort is really full. Those times are any major holiday, especially Easter and Christmas-New Years weeks, Spring Break (early March through middle April) and any 3 day weekend. Some of my

favorite times are in May before the schools let out, the middle of October and the first week of December. The best advice I can offer is to plan ahead. Be sure to do some research on the web or check the book stores for guides to Walt Disney World.

You can also go to

www.disneyworld.com and order their free vacation planning guide. There is a lot to see and do so trip planning is a must. Do not just "wing it". I made that mistake the first time and vowed never again. After 9



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trips in the past 4 years I still have a plan on what we will do and try to stick to it. Also, be sure to get everyone's input. If your kiddos want to see Playhouse Disney Live on Stage, do it. Just because it's geared to younger kids doesn't mean you won't enjoy it. And yes folks, this includes a ride that has that certain song that makes you want to rip your hair out. I'm sure you know it. It starts out with "It's a world of laughter, a world of tears..." and has to do with a small world after all.

Park hopper tickets are a must! That way, if you have had enough fun at Magic Kingdom, you can head over to EPCOT for an evening of excitement. By the way, be sure to drink around the world while exploring World Showcase. Park hopping is a good way to avoid the crowds too. If you get to the resort early enough, you can catch most of the major rides before noon. Head back to your hotel, take a dip in the pool or just take a nap. There is so much to see and do, your head will spin. And for little kids it can be sensory overload. Take breaks! There is nothing worse than walking down Main Street USA and seeing a family yelling and screaming at each other. Be sensitive to the needs of your body and your family. There is plenty of time to see everything.

After 8 days of magic (not to mention drained checking/savings accounts and maxed out credit cards) it is time to leave. The morning of departure simply walk your baggage to the luggage service area. Disney employees will check your bags and transport them to the airport. Make sure to get your claim tickets. Maybe take one more journey to your favorite park or simply go resort hopping. Check out the hotels where you would like to stay next. If you are like me, you always take the last flight out of Or-

lando back home. Tonight's flight will be the same. Flight 405 is scheduled to leave at 7:50 PM and is a McDonnell Douglas "Super 80". Let me tell you, there is nothing super about a Super 80. Our route of flight will be the Orlando Eight CTY (Cross City) SZW (Tallahassee) CEW (Crestview) MCB (McComb) into AEX (Alexandria) for the Dumpy Two arrival into KDFW. Flight level will be at 36,000 feet. Because we are flying west, it will take us a little longer than getting here. Estimated flight time is 2 hours and 28 minutes but this pilot is a little cranky/tired and just wants to get home. I'm betting it is balls to the wall after flight level 100.

All I can remember about the flight was the takeoff to the south with a westward turn. As luck would have it we are on the left hand side of the aircraft starting a northbound turn direct to CTY. We get a great look at the Disney World Resort complex. It's a shame it isn't 9:00 PM. If it were we would get a great look at Illuminations and Wishes. Viewing the resort from this height and seeing it the way He sees it, I sit back and think about the week we had. There was a lot of fun had by all and as I recline my seat I am already thinking about the next trip. Where we may stay, what we might do differently. As I drift off I smile. The next thing I know is the flight attendants are telling us that we are preparing to land and that I have to move my seatback up. Alas, I comply with the rules and I gaze out the window. Another landing to the south on 17C. The mains kiss the ground and we taxi to the gate. Another air adventure is complete.

NATCA



NATIONAL AIR TRAFFIC CONTROLLERS ASSOCIATION
WE GUIDE YOU HOME



STOP DREAMING. START FLYING.SM

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AIRCRAFT REVIEW

P-51 MUSTANG

By: Mike McCarthy

This article is the first in a series of reviews of my favorite aircraft, the short list consisting of the P-51D, the F-86H and the 727-200, with the L-1049G Super Constellation being a strong runner-up. I hope not to repeat things you already know. Instead, my goal is to entertain you with little-known facts arising from research done on the Internet.

For example, I'm not going to bore you with the usual recounting of Chuck Yeager's exploits in his P-51D Glamorous Glen III. I will, however, remark that he and

"Gentleman Bob" Hoover of air show fame were test pilots together at Muroc Field, later to be renamed Edwards AFB in honor of Glenn Edwards, the pilot killed in the crash of the YB-49 Flying Wing full-scale prototype.

(See? Already things are getting interesting. By the way, I have a personal connection to the YB-49 project in that my best friend in college was the son of the engineer who designed the YB-49 nose gear. I was a lot more impressed by this than was my friend, who was interested only in physics and not at all in aviation.)

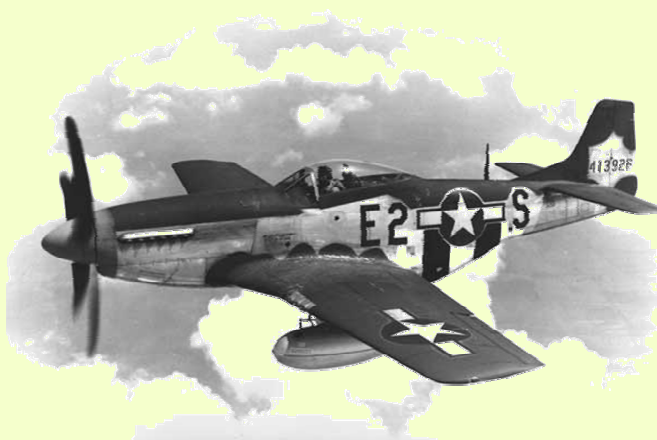
(Another interesting tidbit: When I was learning to fly at Princeton Airport in New Jersey during the late 60s, off on the side of

the field was a wrecked P-51D (very hard wheels-up landing) which was offered to me for \$5,000. Had I been able to manage the price and storage fees, today that damaged airframe-with-engine probably would be worth at least \$1,000,000 US, quite possibly a lot more.)

Okay: Let's get started ...

The Project

It turns out that the guiding genius behind the overall design of the P-51 was a man named Edgar Schmued, a self-taught German immigrant aeronautical engineer. His story is told in a book available for purchase here



http://www.historicaviation.com/historicaviation/product_info.po?ID=959. If I hadn't just bought a new computer I definitely would buy this book. The project wasn't Schmued's idea (see the next paragraph), but the overall design of the aircraft was.

We all know that the P-51A was a response to a British request for fighters. Less well known is the fact that the British had originally asked North American to build P-40 Tomahawks under license from Curtiss – because Curtiss had no excess P-40 production capacity. The response of North American's president, James H. "Dutch" Kindelberger, was that NAA could deliver a better fighter at lower cost and in less time than it would have taken them to produce the requested P-40s. To help get the rush P-51A aircraft out the door, even though he

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P - 5 1 M U S T A N G

was president of the company Kindelberger worked as one of the P-51 design engineers, and he personally designed the production line for the legendary aircraft, a facility which incorporated many innovations in precision tooling and techniques of final assembly. His approaches to these issues continue as industry-standard practice today.

One of the P-51 design engineers was Eldon Cessna, son of Clyde Cessna, the famous aircraft designer and manufacturer. Another P-51 design engineer was J. Leland Atwood who was also on the design teams for the AT-6 Texan, the B-25, the Twin Mustang, as well as the FJ-1/AJ-1 Fury (the precursor to the F-86). Atwood later headed up NAA during the period when it developed the F-86, the F-86D, the F-100, the XB-70, the X-15 and the B-1. (What a career!)



Reports of production run numbers vary, but counting all models roughly 15,000 were built, of which about 8100 were the classic D model. All Ds were powered by the Packard-built V-1650-7 variant of the Rolls Royce Merlin engine. Fewer than 200 P-51s are flying today, perhaps fewer than 150.

Some Numbers

The P-51 fighter family enjoyed a 19:1 kill ratio while destroying 9,000+ enemy aircraft, with 275 P-51 pilots having been recognized as aces. Note that if we attribute only five kills to each of them, collectively this small number of pilots would have accounted for 1375 kills, roughly fifteen percent of the total enemy aircraft downed by the tens of thousands of men who flew various models of the P-51 in combat.

The D over Japan and Korea

We all grew up hearing about the D's combat record in Europe. Less well known is the fact that Iwo Jima was invaded by us, at a huge cost to the Marines in killed (7,000) and wounded (16,000), in order to a) deny the Japanese the fighter base from which they had been harassing our The Marianas-based B-29 force, and most especially b) to provide us with a base from which P-51Ds could escort the B-29s on their bombing runs over mainland Japan. (Yes, more than two thousand emergency landings were made at Iwo by returning

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P-51 MUSTANG

fuel-starved and/or battle-damaged B-29's, but this was not the main purpose of the offensive to capture the island base.)

Since Iwo Jima was only 600 miles south of the Japanese mainland, the Iwo-based P-51Ds were perfect for the bomber escort mission. The extended range of the Ds meant that as soon as the bombers had turned around and were headed south with feet wet, the Ds were free to loiter over Japan, taking out targets of opportunity both in

More Numbers

I don't want to bore you with specs about wingspan and the like. I do want to say that the P-51 was the first production aircraft to feature a NACA laminar flow airfoil. Most scale model P-51s feature a symmetrical airfoil but my research did not indicate that this approach was taken with any of the actual aircraft.



The empty weight of the D was about 7500 pounds, not a great deal more than the weight of my 5,000-pound station wagon. (Yes, I still have one. I like real cars.) The maximum allowable weight of the D was something like 11,500 pounds including drop tanks along with a full load of ammo plus bombs or rockets. In this configuration the D had a combat radius of about 1100 miles, greatly ex-

ceeding that of any other fighter of the day.

the air and on the ground. The Ds destroyed the Japanese air force, and the B-29s made it impossible for the Japanese to rebuild it.

Five years later, Japan-based P-51Ds were the early ground attack aircraft in the Korean War though they were soon replaced by the early jet fighters such as the Navy's F9F Panther and the Air Force's F-86 Sabre. The USAF inventory of retired Ds was mostly sold to air forces around the world as discussed below. Those aircraft which were not sold entered service with various state Air National Guard units.

For the D model, normal takeoff horsepower was 1490, with 1720 as the nominal War Emergency Power rating with water injection. WEP was only to be used for at most five minutes at a time lest the engine overheat and seize. As I recall, several wartime squadrons in Europe did an unauthorized WEP alcohol injection modification, resulting in a marked increase in WEP horsepower, but accompanied by a marked decrease in time till engine seizure, down to something like three minutes. (Officially

AIRCRAFT REVIEW

P-51 MUSTANG

sanctioned water-methanol injection did not appear till the P-51H with its -9 Merlin, which featured a WEP horsepower rating of 2200 at 10,000 feet and 1900 at 20,000 feet.)

Research reveals that climb time to 20,000 feet was slightly more than 7 minutes, and that the service ceiling was slightly under 42,000 feet. I don't know whether these numbers are with the aircraft at gross weight or at near empty weight. Either way, the numbers are impressive.

A significant portion of the P-51D's forward thrust was attributable to the belly-mounted radiator waste dump chute. (Fifteen percent, as I recall.) Top speed at altitude was around 470 mph, a figure matched only by the Navy's F4U gull-winged piston engine fighter, and by one civilian aircraft ...

... Steve Hinton's famed Red Baron racing RB-51

was, for a time, the fastest piston single engine aircraft in the world, his speed over a ground-level closed course having been measured at 499 mph. The 3500 horsepower Griffon avgas/nitromethane-powered Red Baron held this record until it was destroyed in a crash at the Reno Air Races. I was at Stead Field that day and, my having inspected the torn pieces of the wreckage; it was easy to see that only a miracle had saved Hinton's life. (The aircraft had plowed through a boulder field during Hinton's attempted emergency landing, ripping the machine apart.)

Life after USAF

Beginning shortly after the end of World War II, many P-51s were assigned to US Air National Guard units, some serving until 1957. As they were phased out from USAF and the various ANG units, the inventory of remaining P-51s was mainly sold or donated to air forces around the world, some remaining in service till the early 80s.



As one example, several hundred P-51s were given to the allied air forces in China. Some of these aircraft were ferried to Taiwan in 1948 but the majority of them came into the hands of the People's Republic of China, remaining in service there till the late 50s. Similarly, the Swiss purchased 160 P-51s and kept them in service till 1958. The aircraft was particularly popular with air forces in Central and South America, and one of the largest operators

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was the Dominican Republic, which purchased 44 aircraft, some of which remained in service till 1984.

Links

The Mother Of All P-51 Sites is here ...

<http://www.mustangsmustangs.net/p-51/p51variants/AirRacers.shtml>

You might also want to visit these interesting but less comprehensive sites ...

P-82 Twin Mustang info here ...

<http://www.ambackforum.com/viewtopic.php?p=391192&sid=7774a79494f07e26fe6e43d1b666d204>

Swiss Mustang info here ...

http://www.swissmustangs.ch/59692.htm?session*id*key*=*session*id*val*

Many interesting P-51 facts/specifications here ...

<http://www.icon.co.za/~pauljnr/specs1.htm>

here's a link to a discussion of the Hinton RB-51 including photos of models and the original:

<http://www.svsm.org/articles/rb51/rb51.htm>



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“WORKING FOR AN AIRLINE”

A GREAT JOB OR AND AVERAGE JOB?

By: Jeff Taylor

Sure it sounds like fun, but let me tell you, sometimes it's not all that it's cracked up to be. Those of us who have been in the airline industry for a while tend to see it as just another job. A way to pay the bills and muddle through life like all the others working stiffs. Sure, some positions are more glorified than others like sitting up front deciding how steep to really make that left turn, but I would be willing to bet my paycheck that even they get tired of it some



days.

Sixteen years ago when I was in college, I needed some money. My dad told me that they were

hiring so off I went. (Note to self, dad isn't always right, although more times than not he is). Yours truly was hired to be a fleet service clerk for the paltry sum of \$4.50 an hour. Yep, you read that right, \$4.50. I could make more flipping burgers but the thought of working around planes at the airport was too much to pass up. After training I was on the ramp tossing bags...oops I mean lightly placing customers articles on the bag belt to and from the planes. Sometimes it was a lot of fun, especially in the Spring and Fall. Other times it was miserable. Winter and the cold north wind sucked just as much as bulk loading an L1011 to LAS in the summer with the ramp temperature in the 120-degree range.

Pushing the planes and hooking up the lower and upper deck loaders were the best jobs to have. Stacking bags in the pit of MD80s and 727's, not so much. But because I was one of the smaller guys, I always

ended in the belly. I would make deals though. As long as they would let me push the plane, I would do it. I got pretty good at loading the bags. So good that today my wife still bitches to me about because of the way I load the dishwasher. **Trust me, there is always room!** Dumping the lavs was one of the jobs to be avoided if at all possible. Sometimes, you just had to do it. Don't worry; I never spilled the smurf juice though.

Speaking of the honey/desert bucket, if you didn't connect the hose right you could have some serious problems. I never had any but this one guy did. Poor guy was minding his own business dumping the lavs on a 747. He is up in the basket at the aft end of the aircraft, about 20 feet in the air with nowhere to go. This particular plane had just arrived from Hong Kong or somewhere in Asia. Well good ole Joe Bob (identity withheld to protect him should he be reading this) decided to take a short cut. The next thing I see and hear is "blue juice with floatation devices" hitting the ground, flopping and splashing. I look up and see him just covered in the contents of the lav. Just imagine a Port-a-Potty and multiply that times 100. Truly disgusting! Me, I would have bolted out of there, but he finished the job then came down to get a shower. That's dedication! Sitting here 16 years later thinking about it, where would I have gone? I would have been on the ramp laying in Poo with at least 2 broken legs and god knows what else. Turns out the guys at Hong Kong had been on the receiving end of this one to many times and decided to exact some revenge. It took us over 2 hours to clean up the mess.

Like I said before, pushing out planes and driving the lower/upper deck loaders were

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A GREAT JOB OR AND AVERAGE JOB?

what we all really wanted to do. I don't remember the supervisor's name that came up with the idea but it was great. You know how carrier pilots always fight to have the highest landing grades in the squadron? Well, this supervisor came up with a system and markings so that our plane pushes could be graded. It was a lot of fun and we all busted our tails. Even if we didn't have a



plane to push, we would practice with just a tow-bar. For 3 straight months I was the top pusher and I never fell out of the top five when I was working on the ramp. Working on the ramp was for the most part one of the funnest jobs I ever had and I even got to stay in shape!

Another great thing happened when I worked on the ramp was being selected to be a trainer. When the airline would get a new city or contractor in a city that we already served, someone would have to train them. I was selected to do this after about a year and a half. My first location was Sao Paulo, Brazil/SBGR I was down there for 3 weeks around Thanksgiving 1991. I saw lots of things that I still shudder at today. My first day down there I saw a guy walking across the road. The next thing I see is him under the car and the bag of groceries flying. In a cab going to the city, I heard gun-

fire. Turns out it was drug gangs killing a bunch of street kids. Ahh, a great experience for a 20-year-old kid. I even learned enough of the Portuguese language to get my face slapped. But I kept at it and found that I really enjoyed training. Got some great feed back and some attaboys from the suits at HDQ.

My next training location was Steamboat, CO/KHDN. I hit the mother load there. The bonus was that it was during ski season and I was really into skiing at the time. I bought a season pass lift ticket and would ski all morning then head to the airport around noon. I would even ski at night. I even hooked up with some my class and we would hit the mountain. Steamboat was awesome! What more could a single guy want? Ya, you are right. More money and a woman.

I found both by the end of the next year. Deciding I wanted out of the rain, the heat and the cold, I put in a transfer request to Crew Scheduling. Aced the interview and then found myself behind the desk and phone begging and pleading for crews to fly. There isn't anything worse than calling someone at 5:30 AM and letting him or her know they have been junior manned into flying someone else's trip. I hated it, but because it was part of the job I did it. I figured out the way to do it was to always ask for crewmember by their title: Captain, First Officer or Flight Attendant. That way, they knew it was work calling and they could quickly come up with an excuse. I made a lot of friends because of this. I even met my wife! I guess it was the cold building, the warm glow computer monitors and the soft hum of the computers hard drive whiling away. Anyways, we got married and are still together. Nothing really

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exciting really happened working in scheduling but I was working the LAX desk the day the Northside Earthquake took place. I got a call from a flight attendant saying she couldn't come to work because her apartment collapsed.

I ended up leaving Crew Scheduling in early 1996 and went to the DFW Tower. Now this was a great job! Sometimes a lot of stress, sometimes a lot of boredom but all in all it was incredible. The view is what set it apart. 200 feet up you could see all around. I think the morning sunrises were the best part. Lightning storms were pretty impressive too. Wind would make the tower sway and it was like riding on a ship. Planes everywhere the eye could see. The only thing DFW Airport needed was an Air National Guard base at the north end, but alas, DFW is too busy of a commercial field to have a fighter wing or other planes painted gray based there.

I stayed at the tower for 3 ½ years until I moved to Human Resources, where I am currently located. I have a typical middle management office job to support the airport operation. I review background checks and case files on applicants and employees that are applying for secured areas of the airports. Most days are the same but there is some where I get to do real investigations and I really enjoy those. I am also asked to do all sorts of other things. I guess you could say I am a Jack-of-all-trades, master of nothing. Whenever something needs to be done quick and correctly, they usually come to me.

Now the Perks of working for an airline, the travel privileges. Most airlines call them a privilege not a benefit because they can (and do) take them away. I have personally

never had this happen but know of people that it happened to. All we are asked to do is dress nicely and behave ourselves. Attire for First Class, nice slacks, a polo shirt and nice shoes, for Coach, neat and clean jeans, a polo shirt and tennis shoes do the trick. This is a far cry from jacket and tie for the men and dress with hose for the ladies. They changed this due to fact everyone could tell who the employees were. They were the only ones dressed up.

I have been lucky enough to travel all over the world on my passes and let me tell you. There is nothing better than First Class on a wide body international flight. The food is incredible and talk about comfort. The new seats create your own personal bed. This is the way travel should always be. Alas, it is not free but deeply discounted. For employees with a certain amount of time with the company, they are eligible for free coach travel. It is a great privilege that many of us use to get from point A to point B, but only when we can. Sure I can get to



places like Abilene, TX, Des Moines, IA, Wichita, KS, but I would much rather go to Orlando, FL, Washington DC, Orange County, CA or New York. With airline fares so low and the planes full, it makes Non-

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Revvng difficult. There is nothing worse than trying to plan a vacation and then going on said vacation and having to worry about getting on a flight or getting stuck trying to get home.

Don't get me wrong. I am not complaining about this. Each of you helps pay my salary, to which I say, Thank you for choosing American and American Eagle Airlines, part of the Oneworld Alliance. It just makes me a little anxious around vacation time. Luckily there are ways around this. Airline employees are treated to some other great deals. At my airline, we can purchase full fare tickets 20% off the lowest available rate. This means we get to travel like real people. Confirmed seats, Aadvantage Miles and shorts! I have actually gotten use to this. Trust me, trying to fly to Orlando and the land of Mickey during Spring Break; I want to be as comfortable as possible. No worrying, just get on, strap in and hang on for the ride. We also get some fantastic deals with hotels, car rental agencies and amusement/theme parks. For those of you that have read my previous articles, you know how much I like Disney. Working for the airline, helps support my habit.

Now you have a little picture of what life is like working for an airline. Yes, there are some bad things but there are a lot of good things. Some folks would have you believe that it is just the front-line employees (Pilots, FA's and Passenger Service Agents) that matter most. This is not my belief. There are thousands of other employees that are a vital part of getting planes in the air. Each has an important job and it takes everyone pulling in the right direction in order to help the company succeed. How much we/they succeed is all dependent on you, the traveling public. You all have the biggest voice. If you experience less than expected service, let someone know. Things cannot be

changed if you don't take the time to tell the airline. All airlines want to provide a safe, reliable method of transport for you and your family and they want you to keep coming back.

Just for the record. I have an airline job rated in about $\frac{3}{4}$ of the way to a Great Job. One of these days, I'll get a position with Disney as a aviation/theme park consultant that requires at least 3 rounds of golf a week and then I can move the needle all the way to great job.

Three Green and an On-Time Arrival



March 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

SCHEDULE OF EVENTS

- March 3 — **South East Asian Skies**
VATSEA brings to you its first event for 2007. The South East Asian Skies Fly-in. www.VATSIM.net
- March 9-10 — **Cirrus Mobile Showroom**
Fernandina Beach Municipal Airport
<http://www.cirrusdesign.com>
- March 10 — **Heroes Take Flight Fly-In**
Auburn-Opelika Robert G. Pitts Airport
<http://www.leeredcross.org/Fly-In.htm>
- March 24 — **VATUSA LAS Fly-In/Out** Live from the floor of the VATUSA Convention in Las Vegas. (KLAS) www.VATUSA.org
- March 25 — **ZSE Poker Run IV** VATSIM's ZSE ARTCC 4th annual poker run www.seaartcc.net
- March 31 — **Aviator Poker Run** The Aviator Society and WestCoastATC teams up for a Poker Run. www.westcoastatc.com.

SANTA SCRAMBLE 2006

CONGRATS TO BRAD KIDDER!



After many hours of sifting through the (snow covered) data and chatting with Santa and his elves, The Aviator Society is pleased to announce a "winner" for having the most hours logged in our Santa Scramble 2006. Being that this is the first Santa Scramble it was decided that it is only fair to exclude all the members from The Aviator Society from being eligible (sorry guys, it was either that or coal for each of us in 2007). After weeding out all the

Aviator call signs we have determined that N188FW (Brad Kidder) had logged the most hours on the WestCoastATC Santa Servers.

This year's inaugural Santa Scramble had a pretty good turn out for its first year. Logging 82+ hours with over 20+ members flying on the Santa Flight Servers it proved to be a fairly good event. With a turn out like this one can only imagine what next year may bring.

Santa had his elves make one last "toy" to give the 'winner' and Santa made one last run down to KASG. He dropped off the "toy" in the tower where our very own President of the Aviator Society John Bratcher found it. John met with our Santa Scramble Winner Brad and presented him with this token on ours (and Santa's) appreciation for the hours he flew in the Santa Scramble 2006. From all of us at The Aviator Society, Congratulations Brad on a job well done.

April 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

SCHEDULE OF EVENTS

- April 1 — **MacDill AFB - Air Fest '07**
The world-famous Navy Blue Angels are the show headliners (KMCF)
<http://public.macdill.af.mil>
- April 14-15 — **Eglin AFB Air Show**
Featuring the U.S. Air Force Air Demonstration Squadron - Thunderbirds. (KVPS)
<http://www.eglin.af.mil/>
- April 17-23 — **Sun 'N Fun EAA Fly-In**
33rd Annual Sun 'n Fun EAA Fly-In (KLAL)
<http://www.sun-n-fun.org>
- April 27-29 — **AirPower over Hampton Roads**
The United States Air Force Thunderbirds at the 2007 Langley AFB Airshow (KLF1)
<http://www.langleyaafbairshow.com/>
- April 28 — **Cirrus Design Open House**
Islip Macarthur Airport (KISP).
<http://www.cirrusdesign.com/>

AVIATION TRIVIA ???



What aircraft is considered the largest aircraft ever?

What is the only seaplane to ever break the sound barrier?

Where did the first recorded parachute jump take place?

Which Wright Brother won the coin toss for the first flight?

What was the name of the world's first female licensed pilot?

Please send your responses to trivia@aviatorsociety.com.



T H E A V I A T O R S O C I E T Y

"BROTHERS IN AVIATION"

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Thank You for reading this issue of "The Aviator".

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