

THE OFFICIAL MONTHLY MAGAZINE OF THE 177th FIGHTER WING

# THE CONTRAIL



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*On the cover: An F-16 Fighting Falcon with the 177th Fighter Wing, New Jersey Air National Guard utilizes the cable arrest system during a test April 1, 2017, at the 177th Fighter Wing at Atlantic City Air National Guard Base, N.J. The arrest system is used to stop aircraft in the event of a brake failure and must be tested yearly. (U.S. Air National Guard photo by Senior Airman Shane Karp/Released)*

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For back issues of The Contrail, and other multimedia products from the 177th Fighter Wing, please visit us at DVIDS!



# COMMANDER'S COLUMN



## Remembering Senior Airman Jefrey Ramirez

by Colonel John R. DiDonna, 177th Fighter Wing Commander



Jersey Devils,  
It is with a heavy heart I pen this article. It was a sad and tragic April for our Jersey Devil team – we experienced the passing of one of our team members, SrA

Jefrey Ramirez, as a result of a motorcycle accident. Jefrey was assigned to our Communications Flight, had been employed full time as a temporary technician, and we will miss him dearly. I ask you to keep Jefrey's surviving spouse Stephanie, their children Jax and Izzy, and the entire Ramirez family in your thoughts and prayers. I also am aware several of you have recently experienced the loss of a family member or a friend over the past couple months – my deepest sympathies and prayers are with you as well.

Challenging times are usually quite revealing – and the tragic passing of SrA Jefrey Ramirez revealed to me what the 177<sup>th</sup> Fighter Wing Jersey Devil team is all about. I want to share

with you my experiences from the 177<sup>th</sup> Fighter Wing Commander perspective as they relate to our loss. Wing Command, down to the Unit Commander, were immediately notified, engaged, and were extremely proactive and professional. I would like to recognize MSgt John Gendron – he was assigned as the Family Assistance Representative. John, thank you for shouldering this very difficult role, for your commitment to the Ramirez family, for your professionalism, for your kind spirit, and for your compassion. I would also like to thank Capt. John Dwyer – his knowledge, professional commitment, and actions with respect to mortuary affairs played a critical role in the support to the Ramirez family. There are several other individuals on this base that played important roles and I thank you.

As a Wing team, I could not be more proud of the support I witnessed you provide the Ramirez family. Many of us attended services honoring SrA Jefrey Ramirez; I thank you for attending and participating in providing Jefrey military honors. In addition, I was proud that many of you (both current and previous Wing members) donated to the GoFundMe site created to honor Jefrey.

Lastly, I want to thank those of you who chose to dine at Buffalo Wild Wings on 27 April, where a portion of your bill was donated to the Ramirez family. I am sure much support was provided to the Ramirez family that I am unaware of – thank you!

There is not a day that goes by where something occurs that reminds me how well we, Jersey Devil Airmen, function as a team. Tough times like these are revealing – and you revealed to me how much you care about each other and honor service.

Please be safe, always, but especially over the upcoming summer season. Respect and enjoy what you do for your country, the support you provide to our mission and to one another – and, spend quality time with your family and friends.

Thank you Jersey Devils – I am very proud of you and this organization!





# 177<sup>th</sup> Fighter Wing

*"Community Based, Global Impact"*



## Mission

**Provide Highly Qualified/Combat-Ready Citizen Airmen, Mission-capable Aircraft/Equipment to Support National and State Objectives**

## Vision

**From the Home Front to the Front Lines, Community-based, Professional Airmen, working as One Team, delivering State, National, & Global impact as Full Partners in the Total Force**

## Priorities

- **ONE TEAM:** unified focus ISO the Wing Mission, supportive of the "Wingman Culture"
- **Transparent Operations and Accountable Execution**
- **Disciplined/Regulatory/Compliant Approach to Mission Execution= Effective/Safe Ops**
- **Leadership that Empowers, Mentors, & Challenges**
- **Focused Professional Development:** producing leaders at Community/State/National levels

## Focus Areas

- ❖ **Readiness – Individual, Personal, and Unit Readiness**
- ❖ **Time Management - Use of Airman's Time / Quantity and Prioritization**
- ❖ **Communication – Inter and Intra Unit (up/down/sideways)**
- ❖ **Evaluate/Promote Airmen based on Fitness/Merit/Capability/Performance**

# 177th Airman Selected as Air National Guard's Female Athlete of the Year

Story by Tech. Sgt. Andrew J. Merlock

Photos courtesy of 177th FW/PA and Picasa

HEUSDEN-ZOLDER, Belgium -- Staff Sgt. Danielle Todman (right), 100th Force Support Squadron, leads the way in the women's 800-meter event at the Headquarters Allied Air Force Track and Field Championships, Belgium, Sept. 7, 2011. Todman earned herself a place on the U.S. Air Force Track in Europe team, and competed in the heptathlon, participating in the 100-meters, 800-meters, long jump, high jump, shot put, javelin and Swedish relay events. She placed second in the 800-meter race, but her time was a personal best. (Courtesy photo)



New Jersey Air National Guard Tech. Sgt. Danielle Todman was selected by the Air National Guard as the Female Athlete of the Year.

Todman, a member of the 177<sup>th</sup> Fighter Wing Force Support Squadron, competes on the Air Force Track Team and is currently an alternate for the U.S. Olympic Bobsled team.

“I was humbled and shocked,” Todman said after receiving the honor. “I don’t do this for notoriety, I do this to inspire others.”

Todman first enlisted into the active duty Air Force in 2006. During her six years of service with the Air Force, she competed with the United States Track Team and the United States Air Force Track Team. She enlisted with the New Jersey Air National Guard’s 177<sup>th</sup> Fighter Wing in 2013 and continues to serve as a traditional guardsman. In her personal life, she works as a personal trainer in addition to coaching the Newark Technical High School track team, where she works to help improve and inspire others.

“I help them recognize the why and how to get better,” Todman explained about coaching.

“Earlier in life, I was at a point when I wanted to be better and didn’t know how. I want to help people accomplish things they didn’t think was possible.”

Even after competing in track while attending Bishop George Ahr High School and Bucknell University, Todman continues to improve with age. For instance, in 2015, she was selected to represent the United States in the Military World Games 400m hurdles event, which she ran in 59.69 seconds. Her personal best in the same

event while attending Bucknell University was 62.29s.

“Improvement is a platform,” Todman explained.

“My mom paved the way by serving as an inspiration to me. I also try to lead by example the best I can as a supervisor, trainer and coach.”

Todman continues to lead and set the example for her fellow airmen, especially in the area of the Air Force Fitness Program. The goal of the program is to motivate members to participate in a year-round physical conditioning program that emphasizes total fitness, to include proper aerobic conditioning, muscular fitness training, and healthy eating in order to maintain a higher level of readiness.

“Failure is not fatal,” Todman stated about airmen struggling to meet fitness standards. “It’s a ‘First Attempt In Learning’. Just because you fail, you did not fail as a person. You must ask for help. You can’t get any better if you don’t know what you’re doing wrong.”



# 177<sup>th</sup> Airmen Perform Community Service While Deployed to South Korea



Story by Tech. Sgt. Andrew J. Merlock, 177th Public Affairs

On April 29<sup>th</sup>, 2017, 26 airmen from the 177<sup>th</sup> Fighter Wing visited Aehyang Orphanage while deployed to Osan Air Base, South Korea.

During the visit, the airmen provided the orphanage with \$1,670 worth of toys, candy and everyday essentials that were gathered and raised during the deployment.

“You have been able to bring a smile to 58 children who really needed it,” said Staff Sgt. Michael F. Garcia to the group of volunteers. “I want to thank each and every one of you for making such a memorable day happen and making a little joy go a long way.”

The 177th Fighter Wing has been deployed to Osan Air Base since February. During the deployment, Garcia envisioned, coordinated, and executed the visitation during his spare time.

“I have been continually impressed and humbled by this young NCO’s selfless drive to ‘give back’ and ‘pay it forward,’” explained Maj. Brian T. Cooper, commander of the 177<sup>th</sup> Aircraft Maintenance Squadron.

“My sincere kudos to Garcia and all the Jersey Devils for their outstanding volunteerism and kindness. There are quite a few children that will probably never forget the experience as well.”



Airmen from the 177th Fighter Wing, New Jersey Air National Guard, visit with children at the Aehyang Orphanage, South Korea.

## The F-16 *Fighting Falcon* Part 11 - Current Production Vipers

The first USAF F-16 Block 50, #90-0801, is shown in the "Wild Weasel" markings of the 14<sup>th</sup> FS/35<sup>th</sup> FW at Misawa AB, Japan; it was lost in a tragic mid-air collision in November 2000. (F-16.net photo)



### Background

The previous 10 installments of *The Contrail* told the F-16 story starting from the original Light Weight Fighter concept to the USAF's F-16C/D Block 40/42s. This month's article describes the Block 50 - the last production block supplied to the USAF.

### F-16C/D Block 50/52

The Block 50/52 *Viper* owns the distinction of having the longest production run of all F-16s. However, this is an artifact of the "end of the Cold War" and financial considerations rather than the total quantity of the jets produced. With the Block 50/52, production for the USAF was winding down and budgets were tightened. Lockheed Martin responded by slowing down the production line to extend production as long as possible after the end of the Cold War and the fall of the Communist Soviet regime. This strategy kept both the Fort Worth factory active and the work force employed. As a result, Lockheed Martin had more time to sell F-16s to foreign customers, which in fact, it did successfully.

A major change incorporated in the Block 50/52 jets was the "Improved Performance Engines." For the Block 50 jets, this involved the General Electric F110-GE-129 and for the Block 52 jets, the Pratt & Whitney F100-PW-229. These improved engines were both lighter and more powerful than their predecessors due to design and metallurgy changes.



Other important changes incorporated into the new production blocks included the AN/ALR-56M advanced RWR [Rear Warning Radar]; AN/ALE-47 Group A chaff-flare dispenser system; the faster ND-1295A Improved Data Modem; night vision capable cockpit; Upgraded Programmable Display Generator [UPDG]; Honeywell H-423 Ring Laser Gyro Inertial Navigation System [RLG INS] for a rapid, in-flight realignment capability; GPS receiver; advanced AN/APX-101 IFF [Identification Friend or Foe] interrogator; high capacity 128 KB data transfer cartridge to allow for planned future avionics growth; MIL-STD-1760 data bus for programming new generation PGMs; new Horizontal Situation Display [HSD] for increased situation awareness and tactical flexibility; and a digital terrain system data transfer cartridge. Physically, the Block 50/52 jets have a relocated VHF/FM antenna incorporated into the leading edge of the vertical fin, giving it a greater operating range.

Early Block 50/52 jets were equipped with the Westinghouse AN/APG-68V(5) radar, which has a higher reliability and greater detection range against aerial targets. This radar has a programmable signal processor to allow installation of very high-speed integrated circuit technology. As production continued, the radar was further upgraded to high performance 68V(7) or 68V(8) versions. The range of weapons carried was also expanded. These include the AIM-120 AMRAAM; Joint Attack Munition [JDAM]; AGM-154A/B Joint Standoff Weapon [JSOW]; the AGM-65G Maverick and the AGM-84 Harpoon anti-shiping missile. (The Block 50/52 jets were the first F-16s to carry the Harpoon.)

All Block 50/52 jets were wired to carry the LANTIRN system but USAF jets don't. This is because the primary mission of USAF Block 50/52s is the "Wild Weasel" SEAD role and they are primarily fitted with the Raytheon AN/ASQ-213 HARM Targeting System [HTS] pod attached to the starboard sensor station on the air intake.



This upgraded Block 50D, the standard to which most if not all USAF Block 50/52 jets have been modified to, is with the 52<sup>nd</sup> FW, Spangdahlem AB, Germany; it is carrying wingtip mounted AMRAAMs, Sidewinders on stations 2 and 8, plus AGM-88 HARM and Shrike anti-radiation missiles and a chin mounted HARM Targeting Pod for a typical SEAD mission. (USAF photo)





A Misawa AB based F-16C Block 50 pulls away from a New Jersey ANG 141<sup>st</sup> ARW KC-135R during a stateside exercise. (USAF photo)

As production of this Block continued, so did further enhancements. For example starting in July 2000, Block 50/52 aircraft were equipped with an On-Board Oxygen Generating System [OBOGS]; modularized mission computer; full color multi-function displays and a three-channel video tape recorder. Most of the earlier production aircraft of this block have been upgraded to a common standard with all of these features.

When production began in late 1990 the new blocks were unofficially designed that F-16CJ/DJ, where the "J" suffix denotes their configuration to the specialized Suppression of Enemy Air Defenses [SEAD] role. This was a political consideration similar to the renaming of the originally designated F-16G to the F-16C Block 40/42 described in last month's *The Contrail*.

The first Block 50/52 aircraft, F-16C Block 50 (Ser. No. 90-0801) rolled out of Fort Worth's door on 31 October 1991. It, along with the initial production batch, was originally assigned in April 1992 to the 4<sup>th</sup> Fighter Squadron/388<sup>th</sup> Fighter Wing (Hill AFB). In June 1995 it was part of the group of Block 50 aircraft transferred from Hill AFB to the 14<sup>th</sup> Fighter Squadron/35<sup>th</sup> Fighter Wing at Misawa AB, Japan. Unfortunately, on 13 November 2000, while piloted by the Operations Group Commander Col. Michael Lepper, '0801 collided with another squadron F-16 piloted by Capt. Warren Sneed. Both pilots ejected over the Sea of Japan but only Lepper survived.

The main USAF users of the Block 50/52 jets are the 20<sup>th</sup> FW (Shaw AFB, SC); the 35<sup>th</sup> FW (Misawa AB, Japan); and the 52<sup>nd</sup> FW (Spangdahlem AB, Germany). These jets are actually Block 50D versions equipped with the HARM Avionics/Launcher Interface Computer [ALIC] that gives a full capability for the autonomous deployment of the HARM anti-radar missile. They also have an integrated Shrike anti-radiation missile capability, a Lockheed Martin Pave Penny laser ranger pod along with the Texas Instruments (now Raytheon) HTS mentioned above



In addition to the three “Big Air Force” wings, two Air National Guard units currently fly Block 50/52 *Vipers*. The 179<sup>th</sup> Fighter Squadron (148<sup>th</sup> Fighter Wing) of the Minnesota ANG, based in Duluth, fly Block 50D jets that were transferred from the 52<sup>nd</sup> Fighter Wing at Spangdahlem AB, Germany, starting 27 April 2010. The 157<sup>th</sup> Fighter Squadron (169<sup>th</sup> Fighter Wing) of the South Carolina ANG, based at McEntire ANGB, received Block 52P and Q *Vipers* directly from the Lockheed Martin production line starting in 1995. They proved their mettle during Operation *Iraqi Freedom* where they provided Suppression of Enemy Air Defenses for coalition air forces.

It is worth noting that the HARM Targeting System [HTS] contains a super-sensitive receiver that can detect, classify, and locate threats, automatically and seamlessly passing the data to the HARM missile and cockpit displays. That is where the autonomy comes from. However, the F-16CJ/DJs also can electronically link with an Air Force RC-135V/W *Rivet Joint* reconnaissance aircraft to support the F-16 pilot in sorting and prioritizing targets in a dense battlefield environ-

ment. These features have allowed the single-seat F-16 *Wild Weasel* SEAD aircraft to effectively replace their two-seat, McDonnell F-4G *Phantom* predecessors.

### Block 50/52 Plus

Based on the demands from foreign customers, mainly Greece and Israel, Lockheed Martin developed an advanced version of the Block 50/52, called Block 50/52 *Plus* or more simply, the “50/52+”. The main change is the provision of launching JDAMs in adverse weather conditions. This is accomplished by the addition of a tail mounted synthetic aperture radar that allows for the guidance of 1,000lbs Mk 83, 2,000lbs Mk 84 bombs as well as the 2,000lbs BLU [Bomb Live Unit] warhead. The 50/52+ also has passive missile warning, terrain-reference navigation and provision for the carriage of 600-gallon external fuel tanks or conformal (upper fuselage mounted) fuel tanks. This latter enhancement totally changes the profile of the once sleek jet, giving it a rather ‘heavy’ appearance – a further indication of how far this remarkable jet has evolved from the original Light Weight Fighter concept.

Other enhancements include an improved on-board oxygen generating system as mentioned previously for the Block 50/52, AN/APCX-113 advanced electronic interrogator/transponder IFF system, helmet-mounted cueing system

[HMCS], ASPIS internal electronic countermeasures suite, and very importantly, the Northrop Grumman APG-68(V)9 radar.

This version of the radar has improved detection range (+30%) in air-to-air and air-to-ground modes, higher resolution, potential for growth and supportability in the future. The radar’s configuration provides an ability to operate in a dense electromagnetic environment and resist attempts by the enemy

to jam it. Four targets can be tracked at once in the Situation Awareness (Track-While-Scan) mode. It provides 5 times faster processing speeds and 10 times increase in memory compared to the previous version. Also, there is an increased in the detection capability and map quality in Ground Moving Target Identification mode.

This Hellenic Air Force (Greece) F-16C Block 52+ shows some of the distinguishing external features, including the tail mounted synthetic aperture radar and fuselage mounted “conformal” fuel tanks; compare this jet to photos of earlier blocks in past issues of the *Contrail* to appreciate how the *Viper* has “grown.” (Lockheed Martin photo)



In Israeli Air Force service, the Block 52+ *Viper* is called the F-16I *Sufa*; note the conformal fuel tanks and the enlarged spine that houses Israeli produced electronics. (Lockheed Martin photo)

## Production and Users

The F-16 C/D Block 50/52 entered production in 1991. A total of over 900 were produced or remain on order. Production of the Block 50/52 took place in three factories: Lockheed Martin in Ft. Worth, TX; Turkish Aerospace Industries (TAI), Ankara, Turkey; and Korean Aerospace Industries (KAI), a joint venture between Hyundai, Daewoo and Samsung, Sacheon City, ROK. Ft. Worth is the only production site for the F-16C/D Block 50/52+ and is the only plant that continues to produce Block 50/52 and 50/52+ jets.

The last Block 50/52, 50/52+ jet was delivered to the USAF in 2005. USAF deliveries included 188 F-16C-50s, 28 F-16D-50s, 41 F-16C-50+s and 12 F-16D-52+s. The bulk of the production of these blocks went to foreign customers. Greece is the largest user, flying 40 Block 50 and 100 Block 52+ jets. Israel flies or has ordered 102 F-16D Block 52+s which it calls the F-16I *Sufa* (Hebrew for "storm"). It is equipped with some Israeli produced electronics and weaponry. The two-seat jet is recognizable by the conformal fuel tanks and the enlarged "spine" on top of the fuselage that houses some of the unique electronic components.

Iraq has ordered (or optioned) a total of 96 Block 52 *Vipers*. South Korea operates 92 Block 52 jets produced by KAI, while Turkey flies 50 Block 50+ jets produced by TAI. Turkey is also upgrading about 100 of its earlier Block 15, Block 30 and Block 40 jets to the Block 50+ standard. Other operators are Chile (10 Block 50+); Egypt (20 Block 52); Morocco (24 Block 50); Oman (12 Block 50); Pakistan (18 Block 52); Poland (48 Block 52+); Singapore (34 Block 52+ and 40 on option); and Taiwan (30 Block 50 + 30 Block 52 on order).

Reviewing this rather impressive "order book" for such an advanced jet indicates the importance and predominance of foreign operators; the USAF fleet is relatively modest in comparison as a result of budget restrictions imposed by previous administrations.

Next month our description of the F-16 history will conclude with a look at the latest iteration and proposed variants of the *Viper*.



Lockheed Martin continues to produce the Block 50/52 and 50/52+ *Vipers* for export customers including this jet intended for the Iraqi Air Force shown in a test flight over Texas. (Lockheed Martin photo)



A F-16C Block 52P serial 92-3917 from the 157th FS, South Carolina ANG, is shown performing a demo at its home base, McEntire ANGB; this unit received new-build Block 52P and Qs starting in 1995. (F-16.net photo)

# PARADOCS

By Dr. Andrew Savicky, 177th Fighter Wing  
Director of Psychological Health



## Ten Principles of Good Parenting for our Families of Deployed Airmen

By Doc Andy Savicky, 177<sup>th</sup> Wing Director of Psychological Health

1. **Be a good role model.** Your children are learning to cope and react from the things you are doing. Remember they are always watching you.
2. **Encourage your child.** Find out what their strengths are and encourage them to take risks and try new things.
3. **Be involved in your child's life.** Being an involved parent takes time and hard work. It often means re thinking and rearranging your priorities. Attending those soccer games are important. They want to impress you.
4. **Adapt your parenting to fit your child.** Keep pace with your child's development. Your child is growing up. Consider how their age is affecting their behavior.
5. **Establish set rules.** If you don't manage your child's behavior when they are young, they will have a hard time managing themselves when they are older. Children need structure. Don't micro manage them, just give them guidance.
6. **Foster your child's independence.** Encouraging independence fosters a sense of self direction and improves self-esteem. Let them learn from their mistakes.
7. **Be consistent.** Your most important disciplinary tool is consistency. Be sure they know your expectations and stay consistent with rules and consequences.
8. **Encourage your child to complete their work and then play.** This fosters responsibility and rewards for a job well done.
9. **Treat your child with respect.** Speak to them politely, value their opinion, and treat them kindly. Your relationship with your child is the foundation for their relationships with others.
10. **Teach them to have fun, enjoy life and live in the moment.** Often we are busy "doing" instead of "being". Have fun and laugh together, life is too short.

## Jersey Devils Win

### “Load Crew of the Quarter” Competition

### While Deployed to Osan Air Base, South Korea



U.S. Air Force Staff Sgt. Jon Bybee, second from left, U.S. Air Force Senior Airman Charles Michel, and U.S. Air Force Staff Sgt. Andrew Finnegan, 177th Aircraft Maintenance Squadron weapons load crew members, pose with 51st Fighter Wing leadership after with the 51st Maintenance Group’s quarterly weapons load crew competition at Osan Air Base, Republic of Korea, April 14, 2017. The Airmen, who are deployed to Osan from the New Jersey Air National Guard’s 177th Fighter Wing, beat the top weapons load crew from the 36th and 25th Aircraft Maintenance Units. (U.S. Air Force photo by Staff Sgt. Victor J. Caputo)

MAY 2017

ASIAN AMERICAN PACIFIC ISLANDER HERITAGE MONTH  
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# **FINAL PHOTOS**

**119TH EXPEDITIONARY FORCE SQUADRON**  
**OSAN AIR BASE, SOUTH KOREA**

