

A close-up, low-angle shot of an F-35 fighter jet in flight against a blue sky with scattered clouds. The jet is angled upwards, showing its stealthy, angular design. The cockpit canopy is prominent, reflecting the sky. Various warning labels and markings are visible on the aircraft's surface.

**GENTEX<sup>®</sup>**

# **HIGH PERFORMANCE FLIGHT EQUIPMENT**

GLOBAL AIRCREW & AIRCRAFT MAINTAINERS





# OWN THE SKY

Gentex Corporation takes pride in our dedication to the mission of providing optimal protection and situational awareness to global defense forces, emergency responders, and rescue aircrew operating in high-performance environments.

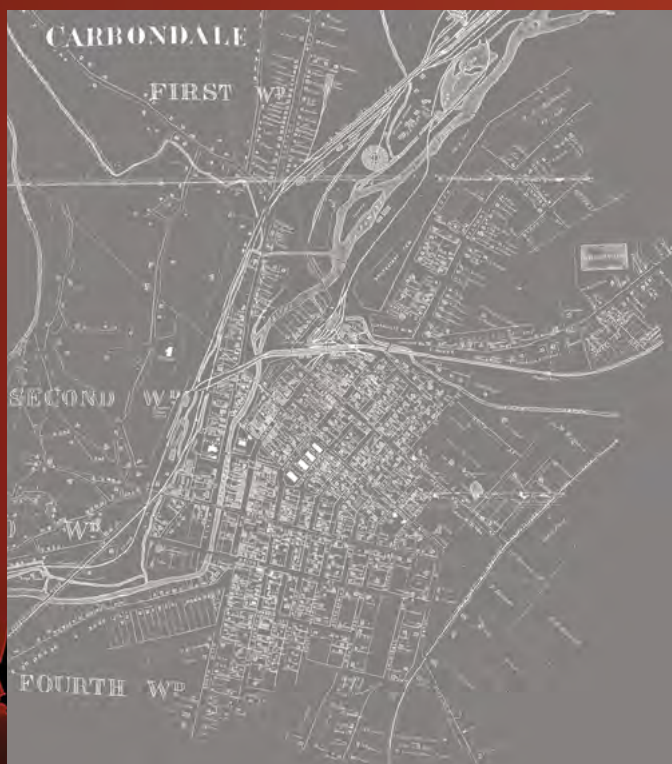
**ATLANTIC** / Air Force A-10 Thunderbolt II aircraft escort an MV-22 Osprey as part of simulated tactical recovery of personnel and combat search and rescue training.

*Photo By: Sgt. Alex Kouns*



# OUR PROUD HISTORY

With a history of innovation that spans over 125 years, Gentex Corporation is the leading supplier of high-performance flight equipment for aircraft maintainers and military, law enforcement, and rescue aircrew worldwide. Leveraging Human Factors Engineering expertise, the company's comprehensive line of durable and innovative helmet systems for fixed wing and rotary wing applications allow for the easy integration of advanced capability upgrades without sacrificing protection. An equally comprehensive line of hearing protection and communication solutions provide aircraft maintainers superior hearing protection and precise, intelligible communications in the most extreme noise environments. Our products are backed by our industry leading training and technical service and support. Whether you're on the ground or in the air, with our Gentex® and Ops-Core® branded products, you'll get the performance you need with protection you can count on.



# MILITARY PEDIGREE

For nearly 70 years, Gentex Corporation has designed and built flight equipment to meet the evolving challenges of aircrew and aircraft maintainers and the exacting requirements of defense forces worldwide, including U.S. Military specifications. Gentex Corporation enforces a strict quality management system, recognized by international quality certification bodies, and maintains test and evaluation facilities for noise reduction, impact and ballistic protection, and environmental resistance to ensure every product meets the published performance requirements.

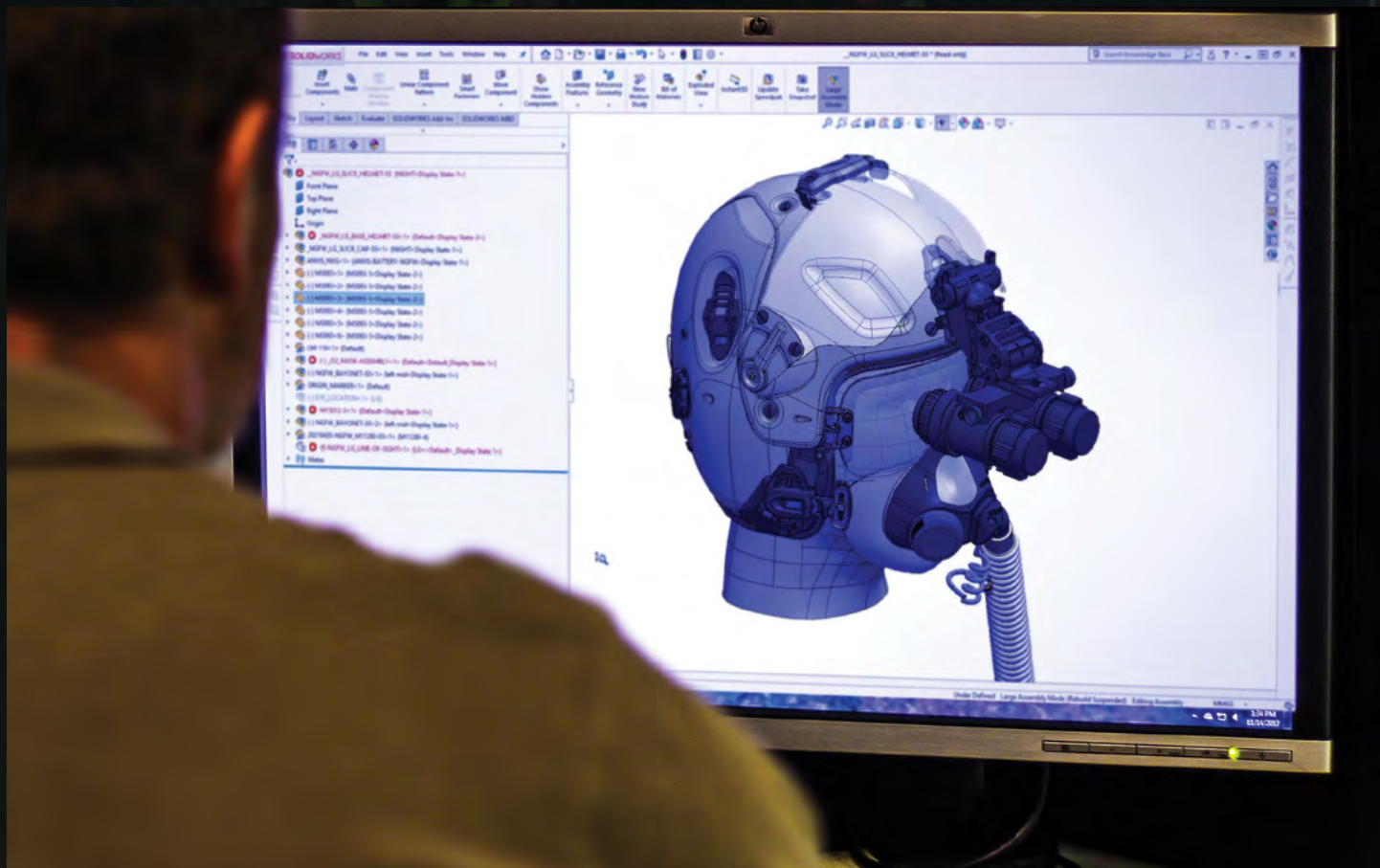


*Photo By: U.S. Air Force Staff Sgt. Marleah Robertson*



# PEERLESS QUALITY

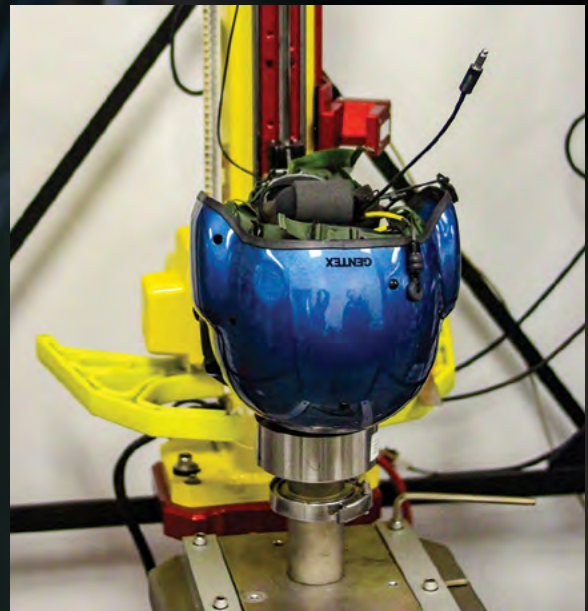
Whether it's a helmet system, a respiratory protection system, leading-edge optics, or a communication headset, Gentex Corporation takes the same all-in approach to product design and engineering. We aim to achieve the maximum protection, performance, and user comfort possible. Gentex Corporation's design and engineering teams transform customer challenges into solutions that work. Gentex Corporation's design and engineering teams work closely with end users to understand their challenges. Our best-in-class product solutions reflect that.





# ENGINEERED & TESTED

It's all about Open Architecture. Our approach to product integration results in systems with components that work together seamlessly and allow the end user to focus on the mission at hand – not their equipment setup. Our system products are designed and engineered to easily integrate and work with Gentex Corporation and other third-party components. This approach gives end users limitless freedom for customization.





# FITMENT

With nearly seven decades of experience in the design and production of flight equipment for aircrew and aircraft maintainers, Gentex Corporation has a deep understanding of the human factors that influence user comfort, safety, and ultimately performance. Our engineers work directly with our customers in the lab and in the field, to produce products that better meet the capabilities and needs, and address the limitations of the aircrew and aircraft maintainers who use them. Gentex Corporation uses engineering methods that include anthropometry, material science, computer-based modeling, and simulated and operational test and evaluation. Recent solutions exemplifying these practices can be found in the following key performance areas.

**USA** / An F-16 Fighting Falcon pilot, assigned to Detachment 1, 138th Fighter Wing, dons his helmet in preparation of a barnstorming performance for reporters.

*Photo By: Tech. Sgt. Drew Egnoske*



## RETENTION AND SUSPENSION SYSTEMS

Retention and suspension systems in our helmets are carefully designed to increase stability, minimize neck load and strain, maintain high field of view to preserve peripheral vision and situational awareness while also providing optimum eye relief when using NVGs or HMDs.

## HMD INTEGRATION

Gentex Corporation is a partner for designing its products around the weight, stability, and capability of Head Mounted Displays (HMDs) with a focus on lightweight composite materials for helmets to offset weight of HMDs. Our advanced optics eyewear can be used with HMDs, accommodate anthropometric variability, and incorporate features that minimize eye strain, provide anti-reflective and laser protective properties, maintain field of view, and allow day and night usage.

## COMFORT

Our unique approach to fit and comfort liners in our Next Generation systems, ensure that each user achieves an individualized bespoke fitting of the helmet. This approach focuses to eliminate hot spots, increase comfort, and reduce thermal burden for the user.



Photo By: Staff Sgt. Joe W. McFadden



# CAPABILITIES & TECHNOLOGIES

## Advancing Aircrew & Aircraft Maintainer Protection And Performance

Gentex Corporation offers a comprehensive portfolio of capabilities and technologies that enable us to deliver innovative solutions for aircraft maintainers and military, law enforcement, and rescue aircrew worldwide. Continually invested in and advanced at our global centers of excellence, our core competencies are aligned with the current and future needs of our customers and address emerging global security challenges in key areas such as laser defense and hearing protection.

### HEADBORNE PROTECTION

Engineered for superior protection and maximum comfort, each unit is measured to personal specifications, minimize headborne weight and lessen fatigue. Head units are also built for multiple configurations of peripherals.



Photo By: LCpl Mark (Doc) Doran

### SITUATIONAL AWARENESS

Always have a competitive advantage confronting threats. From 3D Hear-Through technology to Head Mounted Display (HMD) integration, Gentex Corporation offers superior sensory enhancement and protection for fixed wing and rotary wing personnel.



Photo By: Australian Defence







## HIGH-PERFORMANCE OPTICS

Optical protection for aircrew and aircraft maintainers from Gentex Corporation offers multiple protection options for various aircraft platforms, including tints and laser protection. Precision polycarbonate visors and lenses are used for both defense and commercial applications.

## RESPIRATORY

Gentex Corporation has decades of experience, supplying aircrews with leading-edge respiratory systems. Due to our unique, streamlined design, the wearer gets the highest level of protection and zero interference with mission-critical weapons and equipment.



Photo By: Yasuo Osakabe.  
This image has been manipulated.



Photo By: U.S. Air Force Staff Sgt. Joe W. McFadden



# WHO WE SERVE

Inspired by a multitude of mission needs, environments and variable conditions, integrated modular design is our core innovation intended to equip your team with performance-enhancing components.

With an evolving understanding of potential challenges faced during airborne missions, our engineers and designers develop every piece of equipment to achieve new levels of performance in high-G environments, reduce hazardous noise, shield faces, reinforce impact and ballistic protection, dispel optical threats, and safeguard respiratory function.

## FIXED WING AIRCREW

Give your aircrew the advantage in any airborne mission. Gentex Corporation's lightweight, high-performance headborne systems provide complete protection while reducing fatigue and optimizing user performance. This complete system can be tailored to meet the unique operating needs for any mission.



## ROTARY WING AIRCREW

Prepare your pilots to negotiate combat conditions. High-performance helmet systems with modular, scalable capability safeguard against debris, artillery and lasers with facial, ballistic and optical protection.



Photo By: Airman 1st Class Rebeckah Medeir

## AIRCRAFT MAINTAINERS & GROUNDCREW

Facilitate operations free of complications on carriers, terminals and hangars with components that aid mobility. Shield your crew from the likes of noise hazards and aircraft fumes with eyewear or visors, facial, hearing and respiratory protection.



Photo By: Navy Petty Officer 3rd Class Nathan T. Beard





Photo By: CPL Glen McCarthy



For complete product details, go to [gentexcorp.com](http://gentexcorp.com) 12



# HEADBORNE PROTECTION

## SYSTEM-LEVEL PERFORMANCE

### Protection & Ongoing Optimization

With decades of experience and a keen awareness of airborne environments, we are dedicated to designing high-performance helmet systems with uncompromised protection, comfort, and versatility. Our comprehensive suite of headborne protection systems manage hazardous conditions such as high-G, ejection, wind shear, noise, and debris.

Our innovative integrated modular design is our core innovation to accommodate your team's needs with performance-enhancing components. Configuring your equipment for exceptional performance for both day and night missions has never been easier.

With our Open Architecture, fixed wing, ejection and rotary pilots, aircrew, aircraft maintainers, and loadmasters can expect exceptional protection in addition to features that allow for unparalleled utility and improved situation awareness.

**AUSTRALIA** / Royal Australian Navy Aircrewman Leading Seaman Ben Nixon of 808 Squadron, assesses the Tianjara Fire in the Moreton and Jerrawangala National Parks out of an MRH90 Taipan Military Support Helicopter.



1

## EJECTION & BLUNT IMPACT

We offer helmets in different materials and designs, giving end users more options in the level of threat protection, weight, and price. We are in the forefront of ejection windblast testing for fixed wing helmets, and impact protection testing for rotary helmets, pushing the limits of what's possible.



2

## COMPLETE INTEGRATION

Our end users operate in the most challenging environments and conditions. We provide them with a full headborne systems that integrate communications, situational awareness technology and eye and respiratory support systems. Helmet comes standard with complete protection including optics and hearing protection.



3

## FULL SUITE OF PROTECTION PRODUCTS

Eye protection and vision enhancement can be added with our eyewear and laser protection visors, scalable with Gentex helmet systems. A variety of mandibles are available for additional face protection, configurable to multiple Gentex helmets.





# SITUATIONAL AWARENESS

## READING YOU LOUD AND CLEAR

### Crystal Clear Audio with Scalable Hearing Protection

Thinking ahead of the aircraft is critical to mission success. Gentex's user-driven designs provide the highest levels of hearing protection and increased situational awareness, combined with maximum mission configurability. Our hearing enhancement and scalable hearing protection, combined with microphones optimized for speech intelligibility, allowing for clear communication throughout any mission.

**AUSTRALIA** / SqnLDR Andrew Jackson made history as the first Australian pilot to fly in the F-35A.

*Photo By: Staff Sgt. Marleah Robertson*

1

## MISSION ENDURANCE

Whether accurately interpreting auditory cues or receiving information intelligibly in extremely noisy environments, pilots and crew rely on sound to execute mission objectives. ANR technology in aircrew helmet systems improves aircrew hearing protection and situational awareness.



2

## 3D HEAR-THROUGH TECHNOLOGY

World-class electronic technology provides unprecedented audio quality with the ability to operate in combat environments. 3D Hear-Through (3DHT) restores and enhances “natural hearing” of outside environments. 3DHT control allows the operator to boost their hearing up to +12dB.



3

## SCALABLE HEARING PROTECTION & COMMUNICATIONS

Manage a variety of decibel levels with versatile configurations. Increase mission effectiveness by enhancing helmet configurations with improved hearing protection and communications solutions. Conformable earseals improve passive attenuation and passive noise cancelling microphones improve speech intelligibility.





# HIGH-PERFORMANCE OPTICS

## OPTIMAL THREAT VISIBILITY

### Performance Eyewear for Every Environment

Optical protection for aircrew and aircraft maintainers from Gentex offers multiple protection options for various aircraft platforms, included tints and laser protection. Precision polycarbonate visors and lenses are used for both defense and commercial applications.

**AUSTRALIA** / A Royal Australian Air Force No. 75 Squadron F/A-18A Hornet pilot drops a GBU-16 guided bomb during a sortie on Exercise Diamond Storm.

*Photo By: Australian Defence*



1

## ADVANCED OPTICS

Lenses are available in Dazzle, Clear, Amber, Natural Gray, High Contrast, Gradient, and Photochromic laser eye protection. Future lens options include continued Advanced Laser Eye Protection development (ALEP).



2

## MISSION CONFIGURABLE

Our optics options – ranging from eyewear to visors – are easily configurable to specific threats or conditions faced, night or day.



3

## SCALABLE PROTECTION

Gentex visors are offered in a variety of trims and configurations to deliver premium eye and face protection. Laser defense and advanced, performance-enhancing coatings are available as upgrades to visor lenses.





# RESPIRATORY PROTECTION FOR FLIGHT OPERATIONS

## Freedom and Flexibility

Defense airborne missions demand peak performance, unhindered by the harshness of the environment. Gentex respiratory products for flight operations deliver clean, consistent breathing oxygen with pressure breathing for altitude and G-force. Dependable chemical-biological-radiological-nuclear hoods and respirators provide comfortable, long-duration protection. Integrated microphones facilitate clear communications and lightweight straps and bayonets ensure the right fit and seal every flight.

**AUSTRALIA** / A United States Air Force F-16 Fighting Falcon from the 18th Aggressor Squadron in Alaska sits off the wing of a RAAF F/A-18 Hornet from No. 2 Operational Conversion Unit in the training airspace near RAAF Base Williamtown.

*Photo By: Australian Defence. This image has been manipulated.*

1

## OXYGEN MASKS

The Gentex family aircrew oxygen masks connect fixed wing platform oxygen systems to the person flying the mission. The MBU-20 series of masks delivers safe, consistent breathing performance and protection in the event of ejection. Multiple sizes are designed to provide off-the-shelf fit and comfort to 98% of male and female aircrew. Numerous configuration options allow integration into most fixed wing aircraft.



2

## LPPR

Aircrew respiratory protection for helicopter, tilt rotor, and low altitude fixed wing platforms. 99.97% effective protection against a wide range of particulate contaminants encountered by aircrew in operational environments such as sand, dust, rocket/gunfire residue, lead, hydraulic and other oil-based mist.



3

## TACAIR CBRN

The ultimate in fixed wing aircrew protection for missions into chemical, biological, radiological and nuclear threat environments. The Gentex TACAIR flight ensemble provides head-to-toe protection which integrates with platform oxygen, PBG, communications, hydration, and ejection systems.





# COMPLETE SYSTEMS INTEGRATION

## The Helm of Continuous Innovation

Our high-performance helmet systems feature Integrated Modular Design and Open Architecture, optimal headborne protection are used by fixed wing pilots in high-G environments, pilots navigating through combat conditions in rotary wing aircrafts, aircrew, and aircraft maintainers alike. These innovations allow for multiple configurations and options for situational awareness, respiratory and optical protection, and impact and ballistic protection.

### EYEWEAR

Delivering eye protection from fragmentation threats, blinding glare, and visible and non-visible lasers, our optics enhance vision to increase survivability in high-threat operations.



### VISORS

The STEP-IN® visor assembly, Bungee/ High Speed visor assembly, and the comprehensive laser protection portfolio provide a new level of optical clarity and functionality. Visors are designed to be used with one hand for quick and easy use.



### FACE PROTECTION

Built for protection against ballistic threats and blunt impacts. The conforming soft armor safeguards the lower face from rotor wash, flying debris, and windblast during helicopter operations.



### NVG MOUNTS

Designed to provide a permanent NVG mounting platform to visor housings.





# COMPLETE SYSTEMS INTEGRATION

## MASK LIGHTS

The Gentex Mask Light Microphones provide an essential source of supplemental cockpit lighting for the Gentex High Altitude/Low Profile (HA/LP) Oxygen Mask and the Gentex MBU-20/P Oxygen Mask product lines.

## HEARING PROTECTION

Gentex Corporation's ANR technology is designed to reduce pilot and aircrew exposure to high noise environments in and around aircraft.

## COMMUNICATIONS

Gentex's microphones deliver accurate frequency response and low distortion with high performance, subminiature, lightweight, superior noise-cancelling characteristics. Our comprehensive portfolio of capsule, boom and mask mount microphones easily integrate into existing systems.

## RESPIRATORY & CBRN

Gentex's lightweight, low profile respiratory systems, and advanced CBRN products for fixed wing platforms easily integrate with other aircrew equipment to provide pilots and aircrew around the globe complete system level protection.





**USA** / Capt. Zoe Kotnik, 55th Fighter Squadron pilot from Shaw Air Force Base, S.C., clips on her mask in her F-16 Fighting Falcon prior to a Combat Hammer sortie at Eglin AFB, Fla.

*Photo By: Samuel King*





# FIXED WING

HELMET SYSTEM PLATFORMS







# FIXED WING SYSTEMS INTEGRATION

Gentex's helmet systems are built to suit the needs and challenges faced by fixed wing pilots in any environment, including high-G. The full system includes situational awareness, optical, face and respiratory protection, hearing protection and communications.

## Helmets

Featured HGU-55/P Fixed Wing Helmet System is the most versatile fixed wing helmet available today. *(page 26)*

## NVG Mounts

Featured mount clips to Gentex fixed wing helmet systems utilizing bungee visor systems for nighttime operations. *(page 25)*

## Eyewear & Visors

Eyewear and visors, with photochromic and laser eye protection technology for day, night, and low light environments. *(page 46)*

## ANR

Featured ANR improves aircrew hearing protection and can add situational awareness. *(page 40)*

## Mask Light Mics

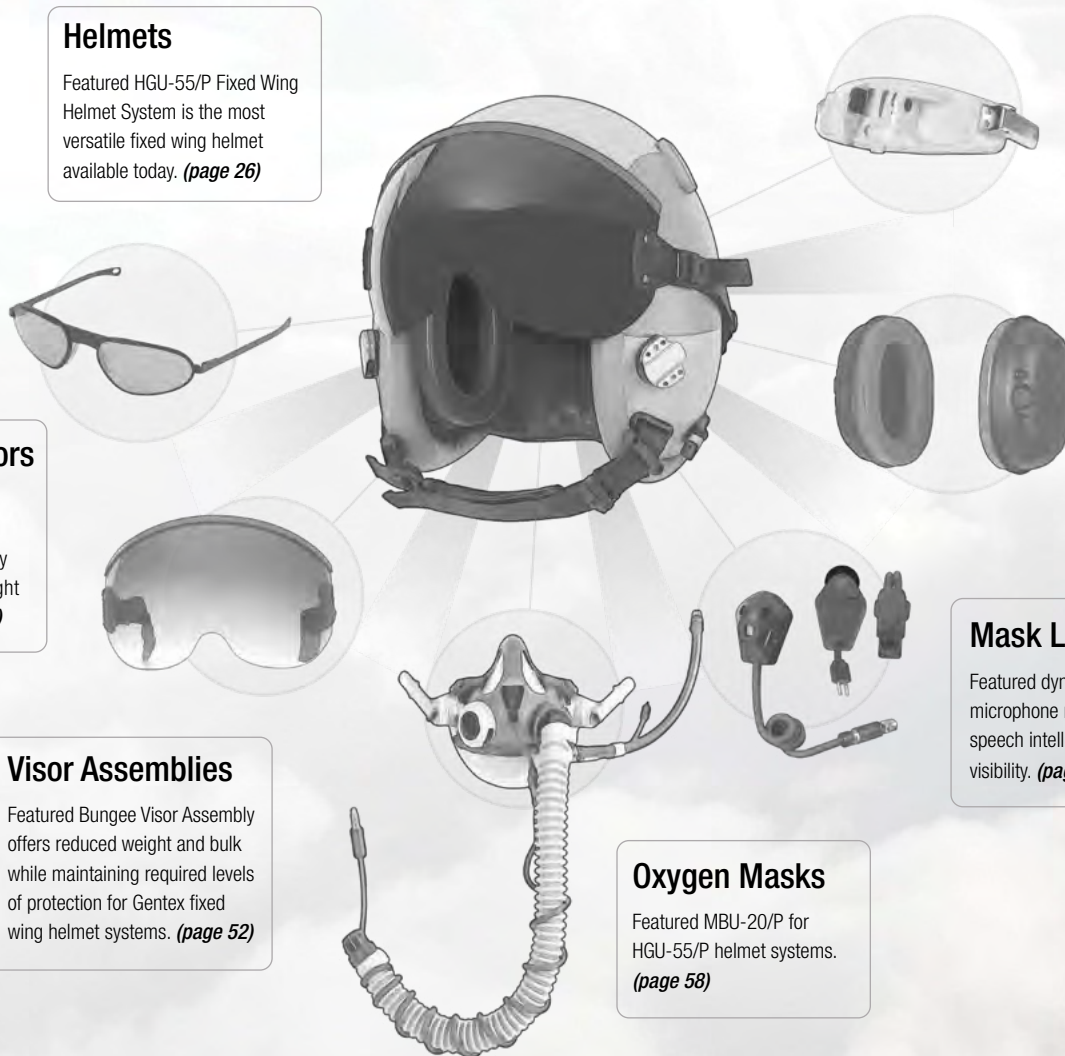
Featured dynamic and amplified microphone mask lights for optimal speech intelligibility and increased visibility. *(page 62)*

## Visor Assemblies

Featured Bungee Visor Assembly offers reduced weight and bulk while maintaining required levels of protection for Gentex fixed wing helmet systems. *(page 52)*

## Oxygen Masks

Featured MBU-20/P for HGU-55/P helmet systems. *(page 58)*





# HGU-55/P

Standard U.S. Air Force fixed wing helmet with high equipment compatibility

The most versatile fixed wing helmet available today, the Gentex HGU-55/P Fixed Wing Helmet System is available in two configurations to suit a full range of mission needs. The lightweight standard version is constructed of a graphite/aramid shell, which reduces headborne weight and promotes high peripheral vision and head mobility. For high-performance maneuvers up to +9 Gs and to help prevent G-induced loss of consciousness (GLOC), the lightweight COMBAT EDGE configuration is the standard for all U.S. Air Force F-15, F-16, and F-22 aircrew. The advanced system provides pilots with a decisive edge in combat by reducing fatigue, allowing them to perform more high-G missions per day without compromising performance. The COMBAT EDGE Kit utilizes a urethane-coated nylon bladder system that interfaces to the Gentex MBU-20/P and HA/LP Oxygen Masks to provide automatic mask tensioning at high-G. Active Noise Reduction (ANR) technology is available for the HGU-55/P Helmet System (see page 40). ANR technology is designed to reduce noise exposure for aircrew flying in louder aircraft for longer missions in military environments.

MIL-SPEC Or Equivalent		MIL-DTL-87174A	
Ejection	Frequency Hz	Attenuation dB(A)	Weight in Lbs.
Up to 600	250	7	<div>2.20 (998 g)</div>
	1000	30	
KEAS	2000	36	
	4000	48	
	8000	47	



**AFGHANISTAN** / Air Force Capt. Brad Hunt taxis to the runway in an F-16 Fighting Falcon aircraft on Bagram Airfield, Afghanistan.

Photo By: Tech. Sgt. Robert Cloys





GENTEX

Fixed Wing Helmet System

## HGU-55/IG

Hard-mounted visor and mask-receiver cover reduces snag hazards during ejection. German Air Force qualified.

- Ejection-Safe NVG Mount offers same stable mounting and functionality as standard NVGs during operations, while allowing a G-induced directional separation of the NVGs and power-pack assembly during ejection
- NVGs and power-pack breakaway safely from helmet during ejection to prevent injury during windblast exposure
- Use NVGs in tandem with Gentex STEP-IN Visor for superior eye protection or with Gentex Laser Visor to block laser threats



GENTEX

Fixed Wing Helmet System

## HGU-190A

Built and qualified for the Canadian Air Force, the Gentex 190A Fixed Wing Helmet System meets the specifications for the Gentex HGU-55/P, with a mission-configurable, hard-mounted dual visor kit.

- Low-profile design
- Lightweight and comfortable
- Advanced protection and stability



GENTEX

Fixed Wing Helmet System (ACS)

## Air Combat

Integrated helmet/mask system for high-G maneuvers in Eurofighter Aircraft. Versions qualified by the German, Finnish, and Saudi Arabian Air Forces.

- Ultra lightweight construction and advanced integrated design reduce head borne weight and bulk for extended use and improved ejection safety
- Integrated bayonets provide added stability during critical stages of flight, allowing inflation of the helmet bladder during high-G maneuvers
- Inhalation and exhalation valves enable low-breathing resistance



GENTEX

Fixed Wing Helmet System

## HGU-55/GTX

600 KEAS safety and unrivaled performance for day and night missions with dual visors, NVG quick disconnect, and optional COMBAT EDGE bladder kit.

- The Gentex HGU-55/GTX Helmet System's unique NVG mount allows for quick attachment and detachment of night vision goggles for safe and easy operation
- Lightweight system, weighing less than 1.4 kg (excluding NVGs) including the Gentex X Liner®
- The optional Gentex HA/LP Oxygen Mask easily integrates to provide complete head and respiratory protection



GENTEX

Fixed Wing Helmet System

## HGU-68/P

U.S. Navy-configured helmet with maximal comfort and peripheral vision. U.S. Navy Qualified.

- Low-profile design
- Lightweight and comfortable
- Advanced protection and stability
- Customizable visors (clear, neutral gray, gradient, high contrast, and laser protective) available in a high-speed versions



GENTEX

Fixed Wing Helmet System

## HGU-55/PJ

Gentex HGU-55/P helmet shell with tracked visor kit for 600 KEAS ejection. Built and Qualified for Japanese Air Force.

- Certified safe for ejection up to 600 KEAS using a tracked visor kit
- The tracked visor kit holds a variety of Gentex visors including clear, neutral gray, high contrast, gradient, or laser visor assemblies. The visor track can be locked in place anywhere along its arc of travel, which greatly assists in optimizing the visor-to-mask interface
- The penetration-resistant helmet shell is constructed from lightweight graphite and carbon materials approved by the U.S. Navy and the shell is painted U.S. Air Force gray for optimal solar reflection





GENTEX

Fixed Wing Helmet System

## ALPHA<sup>®</sup> 900

Fixed wing configurations certified for up to 625 knot ejection. Minimized weight and bulk to support high-G maneuvers, the Gentex ALPHA 900 Helmet System has a locking dual-visor system that includes a soft velveteen cover to protect visors from scratching when not in use.

- Modern, lightweight design for advanced performance and protection
- Scalable and easily configurable with qualified capability upgrades to meet mission specific needs
- Reduced logistics trailband flexible assets



GENTEX

Fixed Wing Helmet System

## ALPHA 900 TRANSPORT MISSIONS

The most configurable helmet system for transport aircrew, the Gentex ALPHA 900 Helmet System can be equipped with an NVG-compatible or non-NVG rigid visor cover and provisions for a maxillofacial shield or oxygen mask.

- Low-profile design
- Lightweight and comfortable
- Advanced protection and stability
- Mission-configurable, hard-mounted dual visor kit









# ROTARY WING

HELMET SYSTEM PLATFORMS





# ROTARY WING SYSTEMS INTEGRATION

Gentex's helmet systems are built to suit the needs and challenges faced by rotary wing pilots in any environment, including combat and rescue missions. The full system includes situational awareness, optical, face and respiratory protection, hearing protection and communications.

## Helmets

Featured Gentex RWH Improved Rotary Wing Helmet System weighs less than the standard Gentex HGU-56/P Rotary Wing Helmet System, making it easily wearable during extended use. *(page 33)*

## NVG Mounts

Featured standard ANVIS is designed to provide a permanent NVG mounting platform to visor housings. *(page 54)*

## ANR

Featured ANR improves aircrew hearing protection, and can add situational awareness. *(page 40)*

## Boom Mics

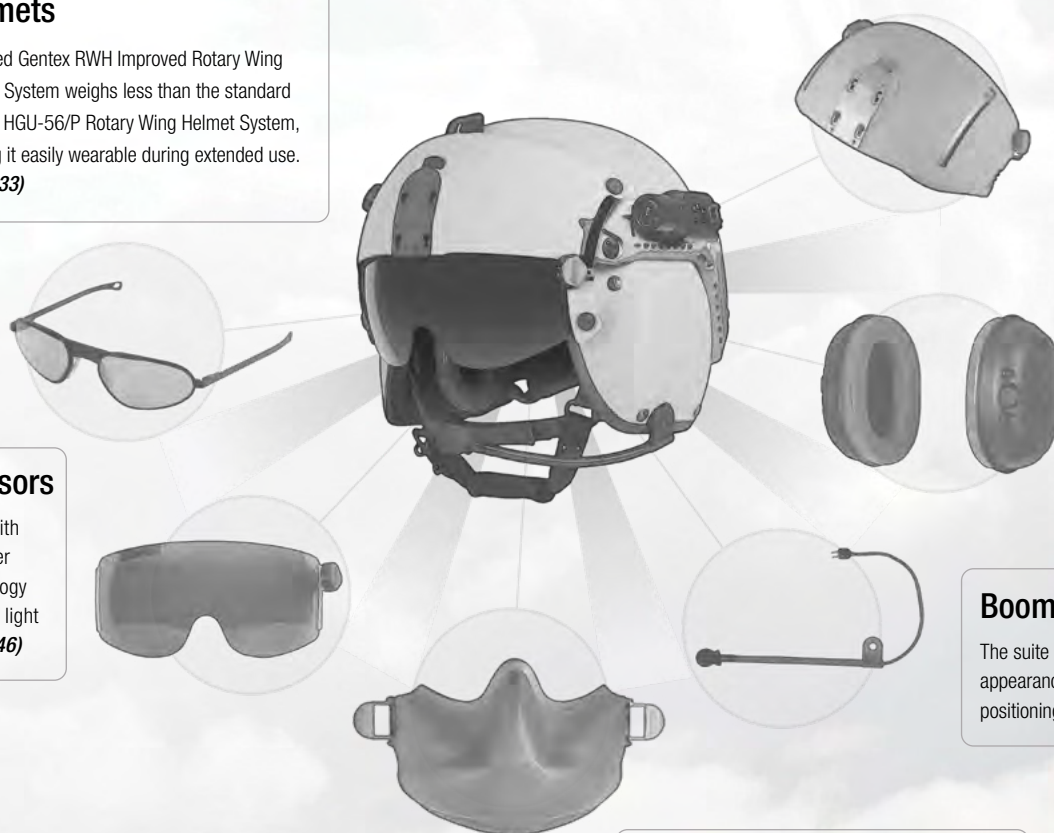
The suite of boom microphones streamline the appearance of headwear and allows for excellent positioning and clarity. *(page 42)*

## Maxillofacial Shields

The Gentex Maxillofacial Shield (MFS) safeguards the wearer's lower face from rotor wash, flying debris, and windblast during helicopter operations. *(page 56)*

## Eyewear & Visors

Eyewear and visors, with photochromic and laser eye protection technology for day, night, and low light environments. *(page 46)*







# RWH

## The U.S. Army standard with leading impact protection

Gentex improved the most popular rotary wing helmet system to support the U.S. Army Air Soldier Program objective to reduce the weight and bulk of flight safety equipment for extended mission requirements of rotary wing aircrew. The Gentex RWH Improved Rotary Wing Helmet System weighs less than the standard Gentex HGU-56/P Rotary Wing Helmet System, making it easily wearable during extended use while maintaining industry-leading impact-protection levels. By utilizing an innovative, lightweight retention and suspension system, the improved system increases comfort and stability. Designed to meet the strict demands of the U.S. Armed Forces, this helmet system can be used with or without helmet mounted display systems or oxygen delivery equipment.

MIL-SPEC Or Equivalent		FNS/PD 96-18	
Impact	Frequency Hz	Attenuation dB(A)	Weight in Lbs.
Not to Exceed 175G	250	14	2.95 (1338 g)
	1000	21	
	2000	26	
	4000	37	
	8000	42	



Gentex RWH Improved Rotary Wing Helmet System (above)  
and Gentex RWH Improved Rotary Wing Helmet System  
with Ops-Core ARC™ rails (left)

**PACIFIC** / A group of Australian Defence Force Parliamentary Programme (ADFPP) participants are guided from the flight deck of HMAS Success after flying to the Australian ship from the United States Aircraft Carrier USS Ronald Reagan.

Photo By: Leading Seaman Brenton Freind





# Apache Block III

Helmet mounted display integration with leading impact protection

Worn by Apache helicopter crews, the Gentex HGU-56/P Apache Block III System is an integrated helmet, display, and sight system with improved safety features and comfort that provides situational awareness and targeting information. The integrated helmet is a key component of the next generation Apache helicopter, the AH-64E, which will be flown by over 15 countries, with over 1,000 helmets fielded to date. This system is an example of Gentex's ability to partner with helmet mounted display manufacturers and end-users to produce advanced, integrated helmet systems. The helmet system is based on the highly successful Gentex HGU-56/P Rotary Wing Helmet System, which was modified for compatibility with an Elbit Systems' Integrated Helmet and Display Sight System (IHADSS). Key features/benefits include: an adapter block for the display system molded to the right eardome of the helmet shell and visor-housing assembly that is designed to accommodate the IHADSS optical combiner; replaces the legacy IHADSS helmet system to maximize cost-effectiveness and provide spare parts commonality with fielded HGU-56/P Helmet Systems; provides the same impact protection levels as the standard U.S. Army HGU-56/P Helmet System to reduce the probability of concussive injury; and it can be configured to include a laser protective visor to protect aircrew from on-board laser designation systems.

MIL-SPEC Or Equivalent		FNS/PD 96-18	
Impact	Frequency Hz	Attenuation dB(A)	Weight In Lbs.
Not to Exceed 175G	250	14	3.66 (1660 g)
	1000	21	
	2000	26	
	4000	37	
	8000	42	



# ABH

Greater than 100% improvement in ballistic protection over the original Gentex HGU-56/P with no weight penalty, while maintaining industry-leading impact protection\* when the helmet is not a personal use item.

*\*Only ballistic protection helmet*

BALLISTIC PROTECTION**			
**V50 values determined using standard 17 grain bullet fragment			
	FPS	FPS	Added Ballistic Protection
Helmet Shell	653	1250	+91%
MFS	732	1300	+78%





GENTEX

Rotary Wing Helmet System

# ALPHA Eagle

Versatile system used for commercial operations including airborne law enforcement and air ambulance services. Optimized fit and stability for flying with NVGs.

- Five available sizes: ensures an accurate fit, minimizing weight effect, and achieving optimum center of gravity
- Stable, comfortable helmet platform: the unique quick fit system, incorporating ratchet nape adjustment, ensures helmet stability is maintained throughout the flight
- Independent ear cup adjustment: the webbing mounted ear cup allows independent fitting of left and right ear positions, eliminates transmitted resonance and together with the shell mounted locking levers, maintains unsurpassed passive noise attenuation



GENTEX

Rotary Wing Helmet System

# HGU-84/P

Lightweight, low-profile, dual-visor design developed for the U.S. Navy.

- Low profile design provides field of view that exceeds many other rotary wing helmet systems
- Provides impact protection without added weight using advanced Styrofoam energy absorbing liner and a rigid Graphlon™ composite for the shell
- X Liner optimizes fit and comfort to further enhance mission endurance



GENTEX

Rotary Wing Helmet System

# ALPHA 900

Designed to be configured for fixed and rotary wing platforms, the Gentex ALPHA 900 is an optimal solution for users looking to reduce their logistic trail as the helmet system can be configured to provide a variety of capabilities to suit the flight operation's specific requirements, including ANR.

- Modern, lightweight design for advanced performance and protection
- Scalable and easily configurable with qualified capability upgrades to meet mission specific needs
- Reduced logistics trailband flexible assets



GENTEX

Rotary Wing Helmet System

# ALPHA 930 DGA MISSIONS

With over 4,000 fielded, this configuration of the Gentex ALPHA 930 Helmet System was developed specifically for the French Direction Generale de l'Armement (DGA) for use in over 25 types of their fixed and rotary wing aircrafts to help meet air, land, and sea operational requirements.

- Low-profile design
- Lightweight and comfortable
- Advanced protection and stability
- Mission-configurable, hard-mounted dual visor kit



GENTEX

Rotary Wing Helmet System

# ALPHA 900 SAR

Optimized for air-to-sea search and rescue operations, the Gentex ALPHA 900 SAR is the world's first waterproof rotary wing helmet system. Based on the design adopted by the UK MoD, the IP67 certified system reduces maintenance with a waterproof and salt-fog resistant comms system, which also prevents related comms failures.

- Features a watertight communications downlead and corrosion resistant hardware and nape adjustment
- Optimized for interfacing to common SAR radios
- Configurable for all major aircraft intercom systems
- Provides an additional 2 dB(A) passive attenuation (vs. the standard Gentex ALPHA 900 helmet system) for added hearing protection







**UK** / Airmen aboard an HH-60G Pave Hawk hoist a pararescueman up to the aircraft during a demonstration at Royal Air Force Lakenheath, England

*Photo By: Staff Sgt. Emerson Nuñez*



For complete product details, go to [gentexcorp.com](http://gentexcorp.com) 37

# SITUATIONAL AWARENESS

READING YOU LOUD AND CLEAR



**MIDDLE EAST** / HMAS Toowoomba receives a supply of mail and stores by vertical replenishment from USNS Amelia Earhart's embarked Super Puma helicopter.

*Photo By: LSIS Richard Cordell*



# Gentex Ear Seals

Compatible with most Gentex Fixed and Rotary Wing Helmet Systems, the Gentex Ear Seals featuring Comply™ Foam Technology provide increased mission effectiveness by enhancing passive attenuation and reducing fatigue. The Gentex Ear Seals provide improved hearing protection and communications, as well as optimum seal integrity, a key factor in noise blocking and hearing safety.

- Advanced patented memory foam provides increased conformability to facial features and around eye glasses, ensuring a more complete seal for limited acoustic leaks
- Proprietary high attenuation foam reduces noise in low frequency ranges (< 200 Hz), where hearing damage is of greatest concern in helicopter noise environments. Attenuation is significantly improved around 1KHz to further enhance speech intelligibility
- Patented Comply Ear Seal technology reduces factors contributing to pilot workload. Soft viscoelastic memory foam exerts minimal pressure on the head of the user while helping goggles and glasses to stay in place
- Improved passive attenuation of up to 5 dB provides increased hearing protection and speech intelligibility, enhancing mission effectiveness
- The Gentex Ear Seals featuring Comply Foam Technology are compatible with commercial and military variations of the:
  - Gentex RWH Improved Rotary Wing Helmet System
  - Gentex HGU-55/P Fixed Wing Helmet System
  - Gentex HGU-84/P Rotary Wing Helmet System
  - Gentex SPH-5 Rotary Wing Helmet System



Featuring Comply™ Foam Technology



**AUSTRALIA** / No 3 squadron F-35A pilot, Squadron Leader David Bell climbs into the F-35A before a training sortie out of RAAF Base Williamtown.

Photo By: CPL Craig Barrett

# ANR

## Active Noise Reduction Technology (ANR)

Gentex's aircrew helmet active noise reduction (ANR) technology is designed to reduce noise exposure for aircrew flying in louder aircraft and during longer missions. Available pre-installed in compatible helmets or field retrofittable, ANR technology can be deployed in aircraft or battery-powered configurations, and at high and low impedances, to enable use in many aircrafts. Adding or upgrading to ANR technology in aircrew helmet systems improves aircrew hearing protection, and can add situational awareness.

- Pre and post-flight performance checks can be performed to verify consistent performance
- Battery or aircraft powered, allowing flexibility in how system is deployed
- Compatible with fixed or rotary wing airframe
- Available in high or low impedance



### Typical Active Noise Reduction Values

Frequency Hz	Attenuation dB(A)
125	10
250	15
500	11
1000	1
2000	-1
3150	-1
4000	-1
6300	0
8000	0



## U.K. MoD Qualified ANR Technology

ANR technology has been MoD qualified for use in Gentex 900 Cross-Platform Helmet Systems. Used by the MoD for the past two decades, this new version has been updated with modern components and circuitry to improve power efficiency and extend the product service life.

- Optimized for aircraft power
- Battery-powered option offering 6 hours of continuous operation also available
- Fielded in Tornado, Hawk, and many transport and combat helicopter craft







**USA** / Pictured are two Typhoons of 6 Sqn patrolling the skies during Exercise Red Flag.

*Crown copyright*



For complete product details, go to [gentexcorp.com](http://gentexcorp.com) 41



# Microphone Capsules



The most frequently selected microphone when the microphone is to be fixed to a helmet or headset by way of attachment to the helmet/headset's exiting boom mechanism.

- Fits to standard wire booms
- Noise-cancelling, amplified, carbon replacement microphone
- Weatherproof, shock and vibration resistant
- FAA approved FAA-TSO C58a
- High impact plastic housing
- Low Distortion
- RoHS Compliant



General Aviation



M-162



M-170

# Boom Microphone



The suite of boom microphones streamline the appearance of headwear and allows for excellent positioning of the microphone in close proximity to the lips, which is critical for proper operation of high-performance, noise-cancelling microphones.

- Noise cancelling dynamic and amplified electret versions
- Non-flammable
- One-piece design rugged flex boom with windscreen and integrated shark fin mount
- Improved speech intelligibility
- Low distortion



# Mask Mount Microphone



Carefully designed to operate with Oxygen and CBRN Masks, our Mask Mount Microphones withstand the rigors of the environment in the mask cavity.

- Designed for use in KC 135
- Mounts to any standard 12P or 20P series oxygen mask
- Meets performance requirement of TSO-C58a category A
- EMI/RFI resistance to 200 V/m







**FRANCE** / Two U.S. Air Force F-35A Lightning II aircraft and two French Rafale aircraft break formation during flight over France during Atlantic Trident 21. The multinational exercise involved service members from the U.S., France and the U.K., and sought to enhance integration, combat readiness and fighting capabilities through complex air operations in a contested joint force environment.

*Photo By: Air Force Staff Sgt. Alexander Cook*



# Bulkhead Mask Mount Microphone



The Gentex Bulkhead Dynamic Mask Microphone was developed for use in the Gentex Low Profile Particulate Respirator (LPPR). Its optimal design features a small profile and positional flexibility when used with the LPPR and Ops-Core Special Operations Tactical Respirator (SOTR).

- Fully encapsulated mask microphone improves communications clarity
- Provides low distortion and excellent passive noise cancellation performance which translates into higher speech intelligibility (greater than 80% MRT) in noise environments up to 115 dBA
- Available options include LPPR (5 ohm dynamic), SOTR (150 ohm dynamic) and with an amplifier for systems requiring an electret mic



# Coiled Communications Cord



36-inch cord replaces straight cord for enhanced flexibility and maneuverability, and features a U-174 connector, available for all Gentex and Gentex ALPHA helmet systems.

- Fits to standard wire booms
- Noise-cancelling, amplified, carbon replacement microphone
- Weatherproof, shock and vibration resistant
- FAA approved FAA-TSO C58a
- High impact plastic housing
- Low Distortion
- RoHS Compliant



# WCEP



Providing advanced hearing protection in high noise environments for commercial & military aircrew, and aircraft maintainer personnel, the Gentex Wire-Free Communication Earplugs (WCEP) Kit operates on the principle of Near Field Magnetic Induction (NFI). The WCEP Kit improves passive noise attenuation, eliminates snag and hot spots associated with earplug wires, and simplifies helmet donning and doffing.

- Provides an ease of use with CBRN gear by eliminating the need to have wires pass through some headsets
- Low impedance 19 ohm
- Does not need batteries or recharging, and no syncing with a transmitter is required
- Fits in helmets and headset earcups to provide redundant operations to existing equipment speakers
- Transmitter fits around the existing transducer found in a Gentex helmet system or headset, so no drilling/cutting or refitting of a helmet or headset is required for installation







Communications

# AMP<sup>®</sup> Communication Headset



## CONNECTORIZED

The AMP Communication Headset features 3D Hear-Through Technology (3DHT) and advanced scalable hearing protection. For optimal flexibility and performance, the modular headset can be easily configured to meet a wide range of mission needs.

## FIXED DOWNLOAD

All the same great features of the Connectorized AMP Communication Headset with a permanently attached, integrated download cable, as opposed to the removable ones of the Connectorized

- World-Class Audio Quality provides world-class audio quality with the ability to operate in combat environments
- 3D Hear-Through Technology (3DHT) restores and enhances “natural hearing” of outside environment for improved situational awareness
- Enhanced Hearing allows the operator to boost their hearing up to +12dB
- Mission Configurable Capability enables the headset to be quickly converted back and forth between an ergonomic headband and helmet-mounted configuration
- Quick-Release Download Connections on each earcup allow the operator to quickly configure between single left/right, dual, or no download configurations
- Optional NFMI (Near Field Magnetic Induction) Earplugs provide increased noise reduction, while maintaining clear communications and 3D Hear-Through ability. NFMI Earplugs do not require wires or batteries. NOTE: Compatible with NFMI-enabled headsets only
- Fail-Safe Communications provides confidence that in the event of battery loss, 3DHT will power off, but the headset and earplugs will still be able to transmit and receive communication
- Ambidextrous Noise-Cancelling Microphone mitigates background noise enabling clear communication. Can be mounted to left or right earcup or removed as preferred, without tools



Connectorized  
Shown in Tan



Fixed Download  
Shown in Black



Photo By: DoD Australia



# OPTICS

SUPERIOR VISUAL ACUITY

**SOUTHEAST ASIA** / Leading Seaman Aircrew Michael Sales conducts pre-flight inspections of a Mag 58 machine gun on the Seahawk MH-60R helicopter embarked on HMAS Parramatta.

*Photo By: LSIS Leo Baumgartner*





# Dazzle Laser Defense Visor

To combat emerging laser threats encountered by pilots during critical phases of flight, Gentex developed a line of laser protective flight-helmet mounted visors. Leveraging decades of experience with military laser eye protection, the Gentex Dazzle Laser Defense Visors can be used by aviators including law enforcement, customs and border patrol, and emergency services.

- Optimal key protection from commercial laser threats allows pilots to easily maintain flight and personal safety during lasing incidents
- Seamlessly integrate with Gentex Rotary Wing Aircrew Helmet systems
- A cost effective upgrade that seamlessly integrates into existing helmet systems
- Available for both day and night wear



Gentex Dazzle  
Laser Defense Visor  
(HGU-56/P Day Version)



Gentex Dazzle  
Laser Defense Visor  
(HGU-56/P Night Version)



Gentex Dazzle  
Laser Defense Visor  
(Gentex ALPHA Day Version)



Gentex Dazzle  
Laser Defense Visor  
(Gentex ALPHA Night Version)



Gentex Dazzle Laser Defense Visor (Night Version) integrated in a Gentex HGU-56/P Rotary Wing Helmet System



# Dazzle Laser Defense Spectacle

To combat emerging laser threats that may be encountered by pilots during critical phases of flight, Gentex has developed a line of laser protective spectacles.

- Optimal key protection from commercial laser threats allows pilots to easily maintain flight and personal safety during lasing incidents
- Seamlessly integrates with Gentex Rotary Wing Aircrew Helmet systems
- Navy approved frame design for compatibility with additional headborne equipment such as Helmet Mounted Displays and Night Vision Goggles



Day Version



Night Version

# Photochromic Technology



## LIGHT ACTIVATED LENS TECHNOLOGY

Gentex Photochromic coating absorbs direct, or light filtered through an aircraft windscreen to activate the photochromic molecules causing the lens to darken or lighten when exposed or removed from light. This enables users to manage variable lighting conditions with one visor, ending the need to switch between clear and tint visor during a mission. By reducing the burden and weight of carrying two visors, it increases ease of product use, allowing for seamless mission configuration.

## Photochromic Visors

- Reacts in direct sunlight and in vehicles (through canopies and windshields)
- Begins darkening instantly
- Adapts seamlessly for day-to-night operations
- Clear state transmissions of greater than 80% PLT (Photopic Luminous Transmittance), offers future opportunity for combining technologies
- Maintains a neutral gray color when in darkened state
- External visor surface protected by Gentex's proprietary scratch resistant hard coating
- Replaces the need for two visor (clear and tint) kits



## AVAILABILITY

Gentex Photochromic Visors will replace the need to operate two visor systems kits in most Fixed and Rotary Wing configurations.



Gentex HGU-55/P  
Fixed Wing Helmet



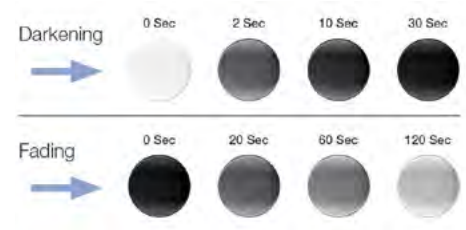
Gentex HGU-56/P  
Rotary Wing Helmet



Gentex HGU-68/P  
Fixed Wing Helmet



Gentex ALPHA Eagle SAR  
Rotary Wing Helmet







**AUSTRALIA** / An Australian Army CH-47 Chinook loadmaster from 5th Aviation Regiment keeps watch for the 'enemy' during a sortie during Exercise Diamond Strike, conducted in the Shoalwater Bay training area, Queensland, from 20-30 June 2015.

*Photo By: LSIS Jayson Tufrey. This image has been manipulated.*

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# COMPREHENSIVE LASER PROTECTION PORTFOLIO

## COMBAT HAZARDS OF VISIBLE AND NON-VISIBLE LASERS WITHOUT COMPROMISING VISUAL ACUITY

Complementing Gentex Dazzle Laser Defense Eyewear, Gentex provides laser eye-protection visors and spectacles that offer industry-leading protection from visible and non-visible (near infrared) wavelengths, which prevents eye damage from various laser-equipped military systems. These visors and spectacles can be designed to protect against a wide range of threat profiles while maintaining high visible transmission and color perception.

## Laser Visor

Gentex is a world leader in the design and manufacturing of laser eye protection visors and spectacle lenses for commercial and military-grade laser threats. Gentex Laser Visors and Spectacles are available for all Gentex aircrew helmets. Gentex's laser protection targets specific laser threats and non-visible wavelengths to protect against a wide range of threats.

- Protection from highly specific laser threats including 1064nm or Neodymium: Yag
- Available in Optical Densities (OD) ranging from OD 4 to our highest option for absorbing laser energy, OD 6
- Laser protective capabilities not compromised after exposure to high and low operating temperatures, or scratches in its surface
- Front and rear surfaces coated with an abrasion-resistant coating
- Hard coating of the lens in accordance with MIL-C-83409, to reduce scratching and scuffing



Jag Self Protect Laser  
Eye Protection Spectacle



**AFGHANISTAN** / An Air Force captain taxis an F-16 Fighting Falcon before a night mission at Bagram Airfield, Afghanistan.

*Photo By: Staff Sgt. Katherine Spessa*



# Visor (Non-Laser)



Gentex offers an extensive selection of high quality visors that protect the eyes and face from sun glare and flying debris while enhancing the flight experience. Choose from our wide selection of visor lenses and assemblies to suit your specific mission needs.

## Standard Visor Lenses

All Gentex legacy visors offer quality distortion-free optics and basic ballistic and impact protection. Gentex optics (including Clear Visors) provide 99% protection from damaging UVA, UVB, and UVC sunlight. Amber visor lenses enhance visual acuity in more demanding flight or terrain conditions, and are engineered with specific dyes to offer contrast to the field of view in hazy or foggy conditions. Neutral Gray visor lenses are developed to provide sun glare protection.



Clear



Amber



Neutral Gray

## Advanced Visor Lenses

For more advanced mission needs, Gentex has developed high-contrast and gradient visor lenses.

### HIGH CONTRAST

Engineered for use in snow, haze, fog, overcast, and cloudy environments, these visor lenses provide aircrew with a heightened and enhanced field of vision when flying in low-light conditions. Absorber dyes molded into the polycarbonate optic renders the visor lens a unique yellow color and filters certain invisible and visible wavelengths.

### GRADIENT

Engineered specifically for sun glare protection and to allow aircrew to see cockpit instrumentation clearly. Tinted and standard neutral gray color at the top transitions to clear at the bottom where optional Gentex Oxygen Masks or Maxillofacial Shields are interfaced.



High Contrast



Gradient

# STEP-IN® Visor Assembly



Close-fitting visor frame compatible with NVGs and HMDs. Clear or laser protective lenses available. Visor assembly also available for Gentex ALPHA helmet systems.

- Optional upgrade to Gentex HGU-55/P, HGU-68/P or HGU-84/P Helmet Systems
- Lens is moved approximately 1 inch closer to the face
- Clear or laser protective lenses available
- Compatible with Night Vision Goggles (NVGs) and Helmet Mounted Displays (HMDs)
- Provides facial protection from windblast, high light intensity, spall resulting from canopy or screen failure, ballistic and fragmentation threats, laser threats, impact threats, rotary or jet wash, and inclement weather conditions



# Bungee/High Speed Bungee



The Gentex Bungee Visor Assembly offers reduced weight and bulk while maintaining required levels of protection for Gentex fixed wing helmet systems.

- Easily attaches to helmet by snaps, using elastic or "bungee" straps, which allows complete adjustment for positioning the visor and oxygen mask to get a good fit
- Available in neutral, clear, gradient, amber, high contrast and laser protection versions
- Fully approved for use by the U.S. Air Force for high-speed ejection use
- Compatible with Gentex's HGU-55/P Fixed Wing Helmet Systems
- Available in trims for Gentex MBU-20/P and MBU-23/P Oxygen Masks







**USA** / An Air Force F-22 Raptor receives fuel from a KC-135 Stratotanker while both units participate in Vigilant Shield 2017, a field training exercise, in the high Arctic.

*Photo By: SGT Christopher Dickson*



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# NVG MOUNTS

NIGHTTIME ADVANTAGE



GENTEX

NVG Mounts

# ANVIS Quick Disconnect



Allows the quick attachment and easy disconnect of NVGs from visor housings.

- To ensure pilot safety and performance while using Night Vision Goggles (NVG), Gentex offers NVG mounts for many of our helmet system platforms



GENTEX

NVG Mounts

# Standard ANVIS



Designed to provide a permanent NVG mounting platform to visor housings.

- To help ensure pilot safety and performance while using Night Vision Goggles (NVG), Gentex offers NVG mounts for many of their most common helmet system platforms



GENTEX

NVG Mounts

# Banana Bar



Clips to Gentex fixed wing helmet systems utilizing bungee visor systems for nighttime operations. Qualified ejection-safe in the Gentex HGU-55/IG Fixed Wing Helmet System for the Panavia Tornado aircraft ejection system.

- Available for both Platform and Quick Disconnect versions
- 2 upper and lower pins
- Backing plate for the mounting of NVGs to the Gentex SPH-4B and SPH-5 Rotary Wing Helmets



# FACE PROTECTION

WITHSTAND DEBRIS AND SHRAPNEL

**AUSTRALIA** / Australian Army CH-47 Chinook loadmaster  
Corporal Mitchell Benbow from the 5th Aviation Regiment, monitors  
underslung hay bales being delivered to a remote bushfire effected  
farm on Kangaroo Island during OP Bushfire Assist.

*Photo By: CPL Tristan Kennedy*



GENTEX

## Maxillofacial Shields

# HGU-56/P & 84/P

The Gentex Maxillofacial Shield (MFS) safeguards the wearer's lower face from rotor wash, flying debris, and windblast during helicopter operations. An optional upgrade to Gentex's HGU-56/P or HGU-84/P Rotary Wing Helmets, the MFS can also be easily fitted to the Gentex HGU-56/P Rotary Wing Helmet for airlift operations.

- Provides ballistic fragmentation protection up to 550 feet per second (fps)
- A standard wire boom or Gentex Flex Boom microphone can be added to significantly enhance communications clarity
- Compatible with the Gentex HGU-56/P and HGU-84/P Rotary Wing Helmets



GENTEX

## Maxillofacial Shields

# ALPHA Eagle

The Gentex ALPHA Eagle Maxillofacial Shield (MFS) safeguards the lower face from rotor wash, flying debris, and windblast during helicopter operations. An optional upgrade on the Gentex ALPHA Eagle Commercial Rotary Wing Helmet System, the ALPHA Eagle MFS significantly enhances communications clarity by reducing wind noise across the boom microphone.

- A standard wire boom or Gentex Flex Boom microphone can be added to significantly enhance communications clarity
- Compatible with the Gentex ALPHA Eagle Helmet



GENTEX

## Maxillofacial Shields

# ALPHA 900 Series

The Gentex ALPHA 900 Series Maxillofacial Shields (MFS) safeguard the lower face from rotor wash, flying debris, and windblast during helicopter operations. An optional upgrade to Gentex ALPHA 900 Cross Platform Helmet Systems, the ALPHA 900 Series MFS significantly enhances communications clarity by reducing wind noise across the boom microphone.

- A standard wire boom or Gentex Flex Boom microphone can be added to significantly enhance communications clarity
- Compatible with the Gentex ALPHA 900 Series Helmet



# RESPIRATORY AND CBRN

BREATHE EASY

**AUSTRALIA** / BAE technician Mr. Adam Freeman  
strapped in and ready for his back seat ride in a Hawk-127  
Lead in Fighter jet at RAAF Base Williamtown.

*Photo By: CPL Craig Barrett*



GENTEX

## Oxygen Masks

# MBU-20/P

The Gentex MBU-20/P Oxygen Mask is an integral component of the Gentex HGU-55/P Fixed Wing Helmet System, providing pressure breathing for G (PBG) capability to tactical aircrew, while reducing the probability of G-induced loss of consciousness (GLOC). Issued to all U.S. F-15, F-16, and F-22 fighter pilots, and available for international sale, this exceptional unit offers a lightweight, low-profile design with advanced, performance enhancing capabilities.

- Separate inhalation and exhalation valves minimize breathing resistance
- Special reflective edge provides optimum sealing to optimize safety and reduce fatigue
- Silicone-rubber chin cup and cheek flaps provide protection during high speed and/or high altitude ejections
- Automatic mask tensioning during high-G maneuvers
- Versatile, low profile design



GENTEX

## Oxygen Masks

# MBU-20A/P

The Gentex MBU-20A/P is a non-PBG version of the USAF approved pilot oxygen mask system. Equipped with integration communications microphone and optional NVIS compliant Mask Light (shown), the MBU-20A/P provides aircrew on A-10, B-1, B-2, B-52, C-130, C-17, KC-135, U-2 and other fixed wing platforms the same comfort and production as the Combat Edge mask at a reduced cost.

- Five sizes available that "Plug & Play" and offer direct replacement for MBU-12/P
- Increases range of fitting to the 97th percentile male aircrew member down to the 3rd percentile female aircrew member
- Low profile for increased downward field of view
- Ejection windblast qualified to over 600 knots for superior retention and function



GENTEX

## Oxygen Masks

# HA/LP

Gentex HA/LP masks are commercial variants of our world renown MBU-20 series, protecting pilots around the globe. HA/LP variants can be configured to meet the oxygen, PBG and communications system requirement of most defense forces' fixed wing platforms.

- Automatic Mask Tensioning During High G Maneuvers.
- +600 Knot Windblast and Low Breathing Resistance Protection.
- Lightweight Hardshell—Custom-Trim For Maximum Comfort.
- Silicone-Rubber Face Piece for Optimum Sealing and Auto Adjustment Under High Gz.



**GENTEX**

Oxygen Masks

# MBU-23/P

Approved by the US Navy for use across all fixed wing and tilt rotor aircraft. The Gentex MBU-23/P series of oxygen masks are outfitted for integration with communications systems found on Naval aviation platforms.

- Optimal Positive Pressure Breathing (PPB) sealing capabilities
- +600-knot windblast protection
- Silicone rubber face piece incorporates a reflective seal to optimize sealing capabilities
- Separate inhalation and exhalation valves minimize breathing resistance and reduce aircrew fatigue
- Six sizes and soft facepiece for better fit and comfort

**GENTEX**

Oxygen Masks

# EFA/ACS

Worn by Eurofighter Typhoon pilots, the Gentex EFA/ACS mask is an integral component of the Gentex Air Combat Fixed Wing Helmet System (ACS), providing PBG capability while reducing the probability of GLOC. Mask bayonets are designed to not only secure the mask to the helmet, but also supply the ACS helmet bladder with pressure for automatic mask tensioning at high-G.

- Integral part of Gentex Air Combat Helmet System
- Provides PBG capability while reducing probability of GLOC
- Low profile design
- Separate inhalation and exhalation valves enable low-breathing resistance

**GENTEX**

Oxygen Masks

# MiG & Sukhoi-HA/LP

HA/LP variant designed specifically for Russian aircraft platforms.

- Advanced variation of Gentex HA/LP Oxygen Mask
- Interfaces with Russian Aircraft Platforms MiG and Sukhoi
- Designed for use with Russian KKO-5 Type Oxygen System and KP-52M Type Oxygen Regulator
- Available in four sizes





**GENTEX**

## Oxygen Masks

# JSF

The Gentex Joint Strike Fighter (JSF) mask is an integral part of the F-35 pilot headborne protection and situational awareness system. JSF masks are based on MBU-20 technology with an additional anti-suffocation valve and platform specific communications integration.

- Fifteen different mask size and hose length configurations for tailored fit for each JSF pilot
- Automatic mask tensioning during high-G maneuvers
- Anti-suffocation valve
- +600 knots windblast protection

**GENTEX**

## Bayonet Receivers

# Lightweight

Gentex Lightweight Bayonet Receivers have been the mainstay for military flight helmets for more than 30 years, providing a simple and cost effective solution for attaching oxygen masks to Gentex helmets. These high strength steel receivers allow for almost unlimited adjustment and fitting when using the Gentex MBU-12/P or MBU-20/P-series oxygen masks with bayonets.

- High strength steel
- Unlimited adjustment and fitting
- Available in metal or flat black finish

**GENTEX**

## Bayonet Receivers

# Anti-Snag

In conjunction with the U.S. Navy, Gentex developed this modification for the standard lightweight bayonet receivers to reduce the potential for snags from parachute risers or shroud lines during aircraft ejection or manual bailout. This upgrade kit provides a replacement-tapered baseplate for the receiver, which smoothes the contours around the receiver, greatly reducing the threat of snagging on the helmet.

- Design reduces the potential for snags from parachute risers or shroud lines during aircraft ejection or manual bailout
- Tapered baseplate for the receiver
- Works with both the Gentex MBU-12/P and the MBU-20/P series oxygen masks



# MASK LIGHT MICROPHONES

## INTEGRATED LIGHT SOURCE, UNCOMPROMISED SAFETY

Gentex aircrew oxygen mask light microphones deliver hands-free, Night Vision Information System (NVIS) compatible supplementary lighting in the cockpit. Mask lights seamlessly integrate into fixed-wing aircrafts.

## Mask Light Dynamic Microphone

Pictured to the right, integrated with the Gentex HA/LP Oxygen Mask, the Gentex Mask Light Dynamic Microphone offers the only fully integrated, hands-free, night-vision compatible cockpit lighting solution that meets the rigorous U.S. DoD standards for flight safety. The mask light also integrates directly onto the Gentex HA/LP, MBU-20/P, and MBU-20A/P Oxygen Masks, and is battery powered for more than 40 hours of continuous use.

- Hands-free operation is achieved via a lip/tongue switch mounted to the microphone inside of the oxygen mask
- Single white LED and filter meets the requirements outlined in MIL-ST-3009, Night Vision Imaging System (NVIS) Compatible Aircraft Lighting specification
- Windblast and ejection seat sled tested to +600 KEAS and is used by the USAF and multiple European countries




## Mask Light Amplified Microphone

The Gentex Mask Light Amplified Microphone provides an essential source of supplemental cockpit lighting for the Gentex F-35, MBU-23/P, and HA/LP O2 masks. The aviation accessory for today's warfighter is a fully integrated compatible light source and microphone suitable for use during flight operations that require the use of Night Vision Imaging Systems (NVIS).

- Designed and manufactured to rigorous U.S. DoD military standards for use in high altitudes.
- Best-in-Class Lighting Solution
- Airframe Powered





A close-up, profile view of Air Force Capt. Charlene Sufficool. She is wearing a flight helmet with a reflective visor that shows a reflection of the sky and ground. The helmet has various attachments, including a microphone and a label that reads "BH-18". She is also wearing an oxygen mask with a corrugated tube. Her uniform is olive green, and a patch is visible on her shoulder. The background is a bright, out-of-focus orange and yellow, suggesting a cockpit or a similar environment.

**USA** / Air Force Capt. Charlene Sufficool sits in the cockpit of an A-10 Thunderbolt II at Davis-Monthan Air Force Base, Ariz.

*Photo By: Air Force Senior Airman Kayla Palmer*

# Oxygen Mask Tool Kit

The Gentex Oxygen Mask Tool Kit provides all of the necessary tools (7-piece tool set) to support maintenance of the Gentex MBU-5/P, MBU-12/P MBU-20/P, MBU-20A/P, MBU-23/P, and HA/LP oxygen masks.

- The full set of seven tools aids in adjustments to the Gentex MBU-5/P, MBU-12/P MBU-20/P, MBU-20A/P, MBU-23/P, and HA/LP Oxygen Masks, which incorporate an improved Gentex Inhalation Valve Assembly
- Includes rugged case
- Immediate inventory available



# Anti-Suffocation Valve (ASV)

The Gentex Anti-Suffocation Valve (ASV) can be incorporated on the Gentex HA/LP Oxygen Mask. The inspiratory activated anti-suffocation valve allows an unconscious or disabled aircrew member to breathe in the event the mask is not removed from the face.

- Incorporates on Gentex HA/LP Oxygen Mask
- Allows an unconscious or disabled aircrew member to breathe when the mask is on the face



**USA** / A soldier watches out the side door of a UH-60M Black Hawk helicopter as it flies toward Helena, Montana.

*Photo By: Pfc. Michael Hunnisett*







**USA** / After Royal Australian Air Force F-35A pilots are trained on the F-35A, they become embedded in the United States Air Force's 61st Fighter Squadron as F-35A instructors.

*Photo By: SGT Christopher Dickson*

For complete product details, go to [gentexcorp.com](http://gentexcorp.com) 65

# CRU-94/P Integrated Terminal Block

PBG capability reduces probability of GLOC during high performance flight.

- Distributes pressurized breathing gas from the regulator to the pilot's mask and bladders
- Cast aluminum body interfaces with standard parachute harnesses
- Two outlet ports supply breathing gas to mask and vest bladder during PBG



# CRU-60/P

Assures positive locking and prevents flailing during ejection and attaches to an aircrew's parachute harness.

- Advanced fitting warns the pilot when a disconnection has occurred
- Connects to a standard three-pin bayonet oxygen mask hose connector
- Bail-out oxygen attachment nipple designed to mate with a bail-out bottle supply tube fitting



# B1-B

For B-1 Bomber aircrew. Dovetail mounts on left or the right side of the torso.

- Designed to assure positive locking and prevent failing during ejection
- Advanced fitting warns the pilot when a disconnection has occurred
- Connects to a standard three-pin bayonet oxygen mask hose connector
- Meets requirements of U.S. Air Force MIL-C-38271B





# Quick Disconnect

Mates with oxygen mask assembly hoses and disconnects from a MS22058 connector between 12 and 20 lbs. with pin provided for attachment of strain relief cord.

- Hose barb is able to mate with the oxygen mask assembly hose
- Disconnects from a MS22058 connector between 12-20 lbs
- Pin is provided for attachment to the strain relief cord



# 3-Pin

Mates with mask assembly breathing hoses with pin provided for attachment of strain relief cord.

- Comes equipped with pin for attachment



**AUSTRALIA** / Warrant Officer of the Navy  
Martin Holzberger taxing in an F/A-18 Hornet at  
RAAF Williamtown.

Photo By: CPL Peter Borys

Warrant Officer of the Navy  
Martin Holzberger

# ALSIT/JSF Tester

This portable, lightweight Gentex Advanced Life Support Integrated Tester (ALSIT) with a self-contained blower is easily stored and provides pilots and life support technicians the ability to easily conduct preflight activities, scheduled inspections, and maintenance activities on various Gentex oxygen masks. The Advanced LSIT leverages the design fielded by the F-35 Program.

- Oxygen mask communications assessment
- Proper oxygen mask seal testing
- User friendly digital readout if leakage is present on the test set's LCD display
- Leverages ambient air supply for PB1 and PB2 testing (PB1 is forced air at 9.0 +2.0/-3.0 in. Wg.; PB2 is forced air at 16.0 + 2.0 in. Wg.)



# Aircrew Systems Tester (AST)

This portable tester supports the three basic functions needed to provide aircrews with life support testing, oxygen masks and regulators, oxygen mask/helmet communications, and pre-flight checkout of pilot/aircrew equipment.

- Packaged in one lightweight, compact carrying/transit case
- Requires no compressed bottled air source, as it supplies filtered air from its own internal compressor
- Functionally tests all Gentex MBU-series of oxygen masks, including the MBU-12/P, MBU-23/P, MBU-20/P, and HA/LP; CRU-series regulators, to include the CRU-60/P and CRU-94/P; a variety of aircrew-mounted regulators, including CRU-82/P, CRU-88/P, and CRU-103/P; and a wide range of helmet and mask communication features such as 10 VDC, 28 VDC, and Dynamic and Electret communications accessories
- Compatible with Gentex HA/LP, MBU-20P, MBU-15/P or MBU-5/P Oxygen Masks
- The unit can be electrically powered by either an internal rechargeable battery or externally with 110 VAC, 60Hz





# TACAIR Advanced CBRN Respirator System



Compatible with the Gentex HGU-55/P Fixed Wing Helmet System, the TACAIR System simultaneously provides CBRN and Pressure Breathing for Altitude (PBA)/Pressure Breathing for Gravity (PBG) protection. It seamlessly integrates with other mission essential equipment such as Gentex oxygen masks, and optical and hearing protection and communications devices, such as the Gentex Conversational Communications Unit (CCU). The CCU enables clear communication from pilot to rigor when the pilot is rigged into a JSAM chem/bio ensemble. The TACAIR System is also compatible with below-the-neck CBRN ensembles, providing complete head-to-toe CBRN protection, as well as flame and thermal protection.

- Designed and tested to meet stringent performance specifications by the U.S. Department of Defense, providing world-class levels of protection for F-15, F-16, F/A-18, and other fixed wing pilots
- The comfortable lightweight system is completely man-mounted and requires no aircraft modifications or power
- Seamlessly integrates with other mission essential equipment such as Gentex oxygen masks, optical and communications devices such as the Gentex Conversational Communications Unit
- The advanced positive pressure-blown filtered air system allows for 16 hours of continuous head, eye, and respiratory CBRN protection in addition to flame and thermal protection
- Provides PBA protection and when fitted with a PBG kit, protects aircrew at up to 9GZ, offering enhanced mission endurance



# Low Profile Particulate Respirator



Compatible with the HGU-56/P, HGU-84/P, Gentex ALPHA, and other helmets, the Gentex Low Profile Particulate Respirator (LPPR) is a half-mask respirator for airborne applications. The LPPR is designed to provide protection against a wide range of particulate contaminants encountered by aircrew in operational environments such as sand, dust, rocket/gunfire residue, lead, hydraulic and other oil-based mist. The LPPR provides easy comfortable, easy breathing protection with integrated communications microphone and bayonet fittings for helmet integration.

- Offers at least 99.97% filtration efficiency against airborne particulates including lead, asbestos, lubricant mist, and explosive gunfire residue
- Includes a fully encapsulated mask microphone which improves communications clarity by reducing the wind noise associated with a standard boom microphone
- Can be configured for all major aircraft intercom systems and portable radios
- Seamlessly integrates with NVGs and other eye protection products
- Two exhalation valves for easier breathing
- Front mounted inhalation valves and cartridge ports for an enhanced field-of-vision and a quick one-handed filter change



Displayed in both  
Fixed Wing and Rotary Wing  
applications



**USA** / An Army UH-60 Black Hawk helicopter supports air assault training with soldiers at Joint Base Lewis-McChord, WA.

*Photo By: Capt. Brian Harris*





# UPGRADES

LEVEL UP FOR COMFORT & PROTECTION

**AUSTRALIA** / A Loadmaster of the 5th Aviation Regiment maintains communication with the pilot during an Air Mobile Operation training activity following "end ex" at the Cultana Training Area, South Australia.

*Photo By: CPL Nunu Campos*



# RWH Improvement Kit



## Reduced weight, enhanced field-of-view, and increased stability

Upgrade an existing Gentex lightweight RWH, or the standard HGU-56/P Rotary Wing Helmet System, and benefit from new features at a fraction of the cost of a new helmet. The RWH Improvement Kit includes a new Energy Attenuating Liner (EAL), articulating nape pad with chinstrap system, comfort liner, and ear cup fasteners. Users will benefit from the advanced lightweight retention system, which increases comfort and stability while reducing the headborne weight by 50 grams.

- The updated EAL improves situational awareness by shifting the head forward inside of the helmet shell to increase field of view by 3 degrees
- Updated Maxillofacial Shield (MFS) is also available for users who may experience discomfort or interference with their existing MFS as a result of the forward head shift
- Compatibility with Helmet Mounted Display systems, Night Vision Goggles, oxygen delivery systems, and communications equipment are maintained in the upgraded helmet system



GENTEX

Liners

# X Liner



Gentex's most advanced helmet liner, designed specifically for simple field installation, removal, and replacement, provides maximum comfort and ventilation, and includes silver anti-microbial lining to reduce odor and static.

- Specifically designed for simple field installation and for use in all Gentex flight helmets
- Minimizes the problems of heat build-up, liner "roll" and "creep" inside helmets
- Available in two comfort thicknesses: 1/2 inch and 3/4 inch
- Fully hand washable



GENTEX

Chinstraps

# D Ring Chinstrap



Military-style double D Ring chinstrap interlocks through two D rings to ensure positive retention.

- Reduces aircrew impact-injury while improving comfort and stability
- Available for the Gentex HGU-56/P and the SPH-series helmets
- Wide-padded nape area stabilizes the helmet and eases neck strain
- Fire-resistant Nomex® material



GENTEX

Chinstraps

# Snap Chinstrap



Uses a military-style D ring for adjustment with a snap fastener on the other end for quick attachment and removal. The snap feature can be crucial in the event the helmet needs to be removed quickly in an emergency situation.

- Reduces aircrew impact-injury while improving comfort and stability
- Available for the Gentex HGU-56/P and SPH-series helmets
- Multiple adjustment points
- Wide-padded nape strap





GENTEX

Helmet Bags

# Standard Helmet Bag



Carry, store, and protect all Gentex flight helmets, or use for an overnight bag, carrying flight publications, NVGs and other items.

- 2 carrying handles
- 2 external and internal pockets
- Nylon exterior in 2 color options: Black and OD Green
- 18" wide x 18" high
- Fits all Gentex flight helmets, specifically recommended for the Gentex HGU-55/P, HGU-68/P and HGU-84/P helmets



GENTEX

Helmet Bags

# Deluxe HGU-56/P Helmet Bag



Carry, store, and protect all Gentex flight helmets, or use for an overnight bag, carrying flight publications, NVGs and other items.

- 25% larger than a standard helmet bag
- 3 large external and 2 medium internal pockets
- Plush-padded internal lining
- 2 carrying handles and snap hook closure
- Durable shoulder strap





# F-35

INNOVATING FOR THE  
MOST CONNECTED  
FIGHTER AIRCRAFT  
IN THE WORLD



**USA** / U.S. Air Force and Royal Australian air force F-35A Lightning II fly in formation above Bagdad, Ariz., during a commemoration flight celebrating the Air Force partnership between the two nations.

Photo By: Air Force Staff Sgt. Alexander Cook



# F-35 PORTFOLIO

TODAY'S INNOVATIONS & BEYOND



**USA** / U.S. Air Force and Royal Australian air force F-35A Lightning II fly in formation above Bagdad, Ariz., during a commemoration flight celebrating the Air Force partnership between the two nations.

*Photo By: Air Force Staff Sgt. Alexander Cook*

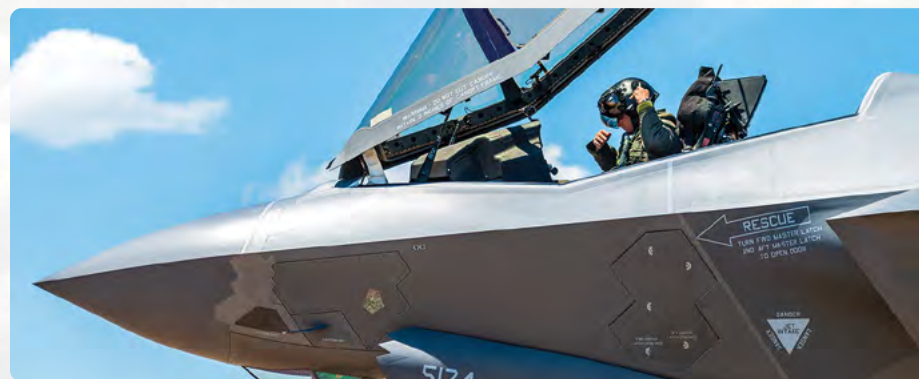


For over 66 years, Gentex Corporation's helmet systems have supported many key programs such as Apache Block III, Joint Helmet Mounted Cueing System (JHMCS), and Helmet Mounted Integrated Targeting (HMIT). Leveraging this legacy of innovation, Gentex was chosen once again to be part of the latest program designed to further advance aircrew technology, the F-35 Program.

## HELMET SYSTEM PLATFORM PROTECTIVE & COMMUNICATIONS PRODUCTS TECHNICAL SERVICES & SUSTAINMENT SUPPORT

Designed to deliver affordable next generation strike-aircraft weapon systems for the Navy, Air Force, Marines, and U.S. allies, Gentex is developing the helmet system platform, along with the respiratory protection system, hearing protection and communications products, eye protection, and an array of technical services and sustainment support for the F-35 Program.

- Helmet System Platform (Shell) with Active Noise Reduction (ANR) Technology
- Argonaut Double Hearing Protection Communications Headset
- Helmet Cable Interface (HCI) Cable
- Oxygen Mask
- Oxygen Mask Tester
- JSAM JSF
- Mask Light Amplified Microphone
- Photochromic Technology
- Laser Eye Protection Optics
- Technical Service and Support
- Custom Fitting Services



*Photo by: ir Force Senior Airman Alexander Cook*

## EASILY INTEGRATE CURRENT AND FUTURE TECHNOLOGIES WITHOUT COMPROMISING PROTECTION

Using human factors engineering, our unique helmet system design allows F-35 aircrew to easily integrate current and future technologies without compromising protection, keeping them safe and always a step ahead. Leveraging this technology, and that of our total comprehensive flight equipment portfolio, you can count on Gentex to do the same for you. Contact us today.





# AIRCRAFT MAINTAINER

HEARING PROTECTION  
& COMMUNICATIONS  
EQUIPMENT



**ATLANTIC OCEAN** / Navy Lt. John Larnerd launches an F/A-18F Super Hornet from the flight deck of the USS Harry S. Truman in the Atlantic Ocean, April 12, 2018.

*Photo By: Petty Officer 3rd Class Kaysee Lohmann*



GENTEX

Ear Protection & Communications

## Argonaut® DHCP

Designed for maximum performance in military noise fields up to and exceeding 125 dB, the Argonaut Double Hearing Protection Communications Headset (DHCP), featuring digital noise-cancelling microphone technology, offers maximum speech intelligibility. Coupled with Argonaut Communication Earplugs, this completely integrated double hearing protector offers excellent noise protection and simultaneous clear communications.

- 32 dB NRR
- Muzzle and boom microphone versions available, along with a variety of radio interfaces
- Military hardened for extreme environmental and EMI conditions
- Use with Argonaut Communication Earplugs



GENTEX

Ear Protection & Communications

## DC2 Hearing Protector

31 dB NRR, patented double cup, double cushion hearing protector provides maximum hearing protection and comfort for continuous 8 to 12 hour use. The DC2 Hearing Protector alone offers over 10x the allowable noise-exposure time when compared with legacy U.S. Navy earmuffs.

- Unique double-cup double-seal design with custom foam earseals for lasting comfort and improved protection
- Earmuff and headband assembly designed to increase population fit rate over legacy U.S. Navy Cranial hearing protector (HGU-25/P)
- Increase of 9 dB NRR over legacy US Navy Cranial (HGU-25/P)
- Both large and small volume, rugged earcups designed to provide excellent overall sound attenuation and meet harsh handling requirements



**USA** / Pictured are two Typhoons of 6 Sqn patrolling the skies during Exercise Red Flag.  
*Crown copyright*





**USA** / Able and Leading Seaman retrieve the sea lashings from the helicopter before it prepares to take off.

*Photo by: ABPH Lincoln Commune*



# RECOMMENDED REPLACEMENT SCHEDULE & PARTS

## Gentex Helmet System Components/Assemblies

Maintain the protection and performance levels of your Gentex helmet system and extend its use by replacing worn out components and assemblies with genuine Gentex replacement parts, available for all of our fielded systems. Over time, parts can become worn, warped or otherwise damaged, which diminishes the protection capability of the helmet system. Based on decades of usage experience, Gentex recommends replacing protection-critical components and assemblies of the helmet system at regular intervals.

## Get Inspection and Repair/Replacement Support

Highly trained personnel at Gentex authorized service and repair centers are available to assist you with the inspection and repair/replacement of Gentex helmet system components/assemblies. For more information, contact Gentex Corporation, or one of our authorized distributors.

## Purchase Genuine Gentex Parts

To ensure the quality and performance of your helmet system, purchase factory-certified replacement parts through Gentex authorized distributors. For a list of distributors, visit [gentexcorp.com/distributors](https://gentexcorp.com/distributors).



Gentex Helmet System Component/Assembly	Recommended Replacement Year*											
	1	2	3	4	5	6	7	8	9	10	11	12
Shell												●
Retention						●						●
Ear Cups				●				●				●
Energy Absorbing Liner			●			●			●			●
Comfort Liner			●			●			●			●
Visors			●			●			●			●
Ear Seals		●		●		●		●		●		●

\* Not intended to replace existing maintenance/inspection procedures. Frequent exposure to harsher environments may require more frequent inspection and maintenance/replacement. Should other/non-protection critical components/assemblies need replacement, contact an authorized distributor. Visit [www.gentexcorp.com](http://www.gentexcorp.com) for full schedule conditions.

### Gentex Oxygen Mask Parts Recommended Replacement Schedule

Replace Every 3 Years	Replace Every 5 Years
Inhalation valve Exhalation valve Compensation tube Oxygen supply hose Strain relief cord	Hardshell and hardshell straps Facepiece

Gentex recommends replacing the components that manage air flow to and inside the mask cavity every 3 years, and the components integral to the structure of the mask every 5 years.

# CUSTOMIZABLE TRAINING AND TECHNICAL SERVICE & SUPPORT

## TRAINING

Pilots and maintainers benefit from training or refresher courses on the proper use, operation and maintenance of Gentex products. Led by our technical sales and engineering experts, courses are held at your site or ours and are customized for your specific requirements. All courses are structured-learning environments and supported with the appropriate hardware, course outline, and applicable technical manuals/operation and maintenance manuals. Length of courses varies depending upon class size and learning components to be covered.

### Training Certifications

Gentex provides certification in several specialty product areas. A series of hands-on workshops are required to achieve Instructor Certification. Specialty Certification runs from 2-4 days and Master Trainer certification runs an additional 1-2 days.

## TECHNICAL SERVICE & SUPPORT

On the phone or in person, Gentex provides technical service and support customized to meet your specific needs, key areas include:

- Fitting, Maintenance, Troubleshooting, and Repair of Pilot Flight Equipment
- Training of Aircrew Personnel in Pilot Flight Equipment (PFE) Operation
- Deploy and Manage In-Country Performance Based Logistics (PBL)/Life Cycle Management Service Plans
- In-Country Inventory Management
- Airworthiness Support and Analysis
- Obsolescence Management
- Systems Engineering
- Engineering Support
- Upgrades and Product Improvements



# WE ARE HERE TO SERVE YOU

## We Serve Customers Worldwide

We work to serve our customers wherever they need us, supporting militaries and security teams in the U.S. and around the world for over 100 years. Dedicated teams at our four facilities in the U.S., two European operations, and a global network of sales offices and agents in over 40 countries are ready to support you.

## We Offer the Power of Gentex Corporation Locally

Partner with a local authorized Gentex Corporation distributor/agent to get our industry-leading products plus all the benefits of working with a local company. To find a location near you, visit [gentexcorp.com/contact](https://www.gentexcorp.com/contact)

## Responsive, World-Class Maintenance Support

To help maintain product performance, we offer replacement parts and maintenance programs for all our fielded systems. This keeps the equipment performing as well as it did when new, and in many cases, even better with the advancement of new components.

**USA** / Marines conduct preflight inspections during an exercise at Marine Corps Air Ground Combat Center Twentynine Palms, CA.  
*Photo By: Staff Sgt. Kowshon Ye*

## Centers of Excellence

Our centers of excellence in the U.S., U.K., and Australia support our strategic alignment with our customers' need for increasingly innovative and affordable products, services, and solutions.

- Simpson, PA, U.S. — Aircrew Helmets, Optics (visors, laser eye protection)
- Boston, Massachusetts, U.S. — Industrial Design
- Manchester, N.H., U.S. — Communications & Hearing Protection
- Rancho Cucamonga, CA, U.S. — Respiratory Protection
- Stranraer, UK — Aircrew Helmets, Communication Systems
- Letchworth Garden City, U.K. — Engineering, Specialized Electronics
- Salisbury, Australia — Sales, Service, Distribution and Product Support





# GENTEX<sup>®</sup>

CORPORATION

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For patent information, go to [www.gentexcorp.com/patents](http://www.gentexcorp.com/patents)

[www.gentexcorp.com](http://www.gentexcorp.com)

Photo By: Capt. Brian Harris