



GLOBAL AIRCREW & AIRCRAFT MAINTAINERS
High Performance Flight Equipment



 www.gentexnorbo.com

GENTEX | NORBO

GENTEX



PERFORMANCE YOU NEED. PROTECTION YOU CAN COUNT ON.

With a history of innovation that spans over 100 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, rotary wing, and cross-platform 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. To help you get the most out of your Gentex solution, all 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®, ALPHA®, Aegisound®, and Ops-Core® branded products, you'll get the performance you need with protection you can count on.

GENTEX®



MILITARY PEDIGREE

Designed to meet the evolving challenges of aircrew and aircraft maintainers, and the exacting requirements of militaries worldwide, Gentex Corporation has designed and built flight equipment conforming to U.S. Military specifications for over 66 years. Gentex enforces a strict quality management system, recognized by international quality certification bodies, and maintains test and evaluation facilities for noise reduction, and impact, ballistic, and environmental resistance to ensure every product meets the published performance requirements.



COMPREHENSIVE 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 six 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.

CORE COMPETENCIES

- Blunt Force Head-Trauma Protection
- Hearing Protection and Communications
- Respiratory and CBRN Protection
- Eye Protection and Visual Acuity Enhancement
- Face Protection
- IFF Identification and Signature Management
- Night Vision Integration
- Helmet Mounted Display (HMD) Integration
- Human Factors Engineering
- Power and Data Integration
- Situational Awareness
- Training, Service and Support

CENTERS OF EXCELLENCE

Our centers of excellence in the U.S. and the U.K. support our strategic alignment with our customers' need for increasingly innovative and affordable products, services, and solutions. Learn more about each one and their specialized research and technological development, design, engineering, manufacturing, and testing capabilities at www.gentexcorp.com/airCOE.

- Manchester, N.H., U.S. — Communications & Hearing Protection
- Rancho Cucamonga, CA, U.S. — Respiratory Protection
- Simpson, PA, U.S. — Gentex Aircrew Helmets; Optics (visors, laser eye protection)
- Stranraer, UK — ALPHA Aircrew Helmets; Communication Systems
- Letchworth Garden City, U.K. — Engineering; Specialized Electronics
- Boston, Massachusetts, U.S. — Industrial Design

HUMAN FACTORS ENGINEERING

With over 66 years experience in the design and production of flight equipment for aircrew and aircraft maintainers, Gentex Corporation has developed 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, limitations, and needs of the aircrew and aircraft maintainers who use them, employing engineering methods that include Anthropometry, Material Science, Computer-Based Modeling, Simulated Test and Evaluation, and Operational Test and Evaluation. Recent solutions exemplifying these practices can be found in the following key performance areas.

Mission Endurance

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

Helmet Mounted Display (HMD) Integration

Gentex is a partner for designing its products around the weight, stability, and capability of HMDs with a focus on Lightweight Composite Materials for helmets to offset weight of HMDs; and Advanced Optics to produce eyewear that 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.

Visual Acuity

To improve visual acuity for aircrew, we designed our visors as follows: No color shift with clear or sunshade visors; excellent optical quality maintains visual acuity and prevents eyestrain; closer fit with the Gentex STEP-IN® Visor provides critical eye protection during ejection events with NVGs or HMDs; crucial face and eye protection from debris, bird strikes, or spall; and broad spectrum UV blocking helps protect against eye damage.





F-35 PORTFOLIO

For over 66 years, Gentex'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. 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 respiratory, hearing, and eye protection products, and an array of technical services and sustainment support for the F-35 Program. 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.

- Helmet System Platform (Shell) with Aircrew Helmet Noise Reduction (AHNR) Technology
- Digital Active Noise Reduction, Double Hearing Protection Communications Headset
- Helmet Cable Interface (HCI) Cable
- Oxygen Mask
- Oxygen Mask Tester
- Chem/Bio (CB) Respirator
- Laser Eye Protection Spectacles
- Technical Service and Support
- Custom Fitting Services





The U.S. is partnering with 10 other countries around the world on the development of the F-35. The major partner nations plan to acquire over 3,100 F-35's through 2038, which will make it one of the most numerous jets in action.

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AIRCREW HELMET SYSTEM PLATFORMS

Gentex leverages over 66 years experience in the development of flight equipment to meet the unique challenges of today's aircrew. Our comprehensive line of durable and innovative fixed wing, rotary wing, and cross-platform helmet systems allow aircrew to easily integrate advanced capability upgrades without sacrificing protection.



Fixed Wing



Helmet System Platforms

Sold under the Gentex and ALPHA brands, Gentex Corporation is the world-leader in lightweight, high-performance helmet systems for high-G environments. To learn about Gentex Corporation's integrated respiratory solutions for our fixed wing helmet systems, see page 45.



GENTEX

HGU-55/P

Fixed Wing Helmet System

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

The most versatile fixed wing helmet available today, the 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 head-borne 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. New Aircrew Helmet Noise Reduction (AHNR) technology is available for the HGU-55/P Helmet System (see page 34). AHNR technology is DoD qualified to reduce noise exposure for aircrew flying in louder aircraft and during longer missions.



MIL-SPEC Or Equivalent		MIL-DTL-87174A	
Ejection	Frequency Hz	Attenuation dB(A)	Weight In Lbs.
Up to 600 KEAS	250	7	<div style="border: 1px solid black; padding: 5px; text-align: center;"> 2.20 (998 g) </div>
	1000	30	
	2000	36	
	4000	48	
	8000	47	

COMPREHENSIVE FIXED WING PORTFOLIO

QUALIFIED FOR AIR FORCES AROUND THE WORLD

Complementing the U.S. Air Force standard, the Gentex HGU-55/P Helmet System, Gentex provides a full line of fixed wing helmet systems to meet the needs of global air forces.



Gentex HGU-55/IG
Fixed Wing Helmet System

Innovative system for Panavia Tornado aircrew provides safe nighttime ejection when flying Night Vision Goggles (NVGs). German and Italian Air Force Qualified.



Gentex 190A
Fixed Wing Helmet System

Meets HGU-55/P specifications with a mission-configurable, hard-mounted dual visor kit. Built and Qualified for Canadian Air Force.



Gentex Air Combat
Fixed Wing Helmet System (ACS)

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

COMPREHENSIVE FIXED WING PORTFOLIO // CONTINUED



Gentex HGU-55/G

Fixed Wing Helmet System

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



Gentex HGU-55/GTX

Fixed Wing Helmet System

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



Gentex HGU-68/P

Fixed Wing Helmet System

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



Gentex HGU-55/PJ

Fixed Wing Helmet System

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

Gentex Paramaster HALO/HAHO

Helmet System

Leveraging our Gentex HGU-55/P Fixed Wing Helmet System, this parachutists' helmet comes with various options for eye protection, noise attenuation, communications, and respiratory integration.

Rotary Wing

Helmet System Platforms

Sold under the Gentex and ALPHA brands, Gentex Corporation manufactures the widest range of rotary wing helmet systems designed to provide unparalleled capabilities with exceptional safety.



GENTEX

HGU-56/P

Improved Rotary Wing Helmet System

The U.S. Army standard with leading impact protection

We improved our 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 HGU-56/P Improved Rotary Wing Helmet System weighs less than the standard 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. Additional design changes provide even better situational awareness by shifting the wearer's head forward to increase field of view. 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. Learn how to upgrade an existing HGU-56/P Helmet System with these new features at a fraction of the cost of a new helmet on page 56. For aircrews that need to easily attach mission-enhancing components, the improved HGU-56/P is available in a configuration with our low profile, lightweight Ops-Core® Accessory Rail Connectors (ARCs) fully integrated. New Aircrew Helmet Noise Reduction (AHNR) technology is available for the HGU-56/P Helmet System (see page 34). AHNR technology is DoD qualified to reduce noise exposure for aircrew flying in louder aircraft and during longer missions.



Gentex HGU-56/P Improved Rotary Wing Helmet System (above), and Gentex HGU-56/P Improved Rotary Wing Helmet System with ARCs (left)

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

GENTEX **NEW**

Apache Block III

Integrated Rotary Wing Helmet System

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. An example of Gentex's ability to partner with helmet mounted display manufacturers and end-customers 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	

COMPREHENSIVE ROTARY WING PORTFOLIO

Complementing the improved Gentex HGU-56/P and the ALPHA Eagle Helmet Systems' industry standards, Gentex provides a full line of rotary wing helmet systems to meet the broad array of aircrew needs.



ALPHA Eagle

Rotary Wing Helmet System

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



Gentex HGU-84/P

Rotary Wing Helmet System

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



Gentex SPH-5®

Rotary Wing Helmet System

Legacy U.S. Military design now in use by commercial pilots.



ALPHA 400

Rotary Wing Helmet System

Multi-fit rotary wing passenger helmet system for a wide-range of head sizes when the helmet is not a personal use item.



Gentex HGU-56/P

Rotary Wing Aircrew Ballistic Helmet (ABH) System

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.

Cross-Platform



Helmet System Platforms



Adopted by the U.K. MoD, our advanced, scalable, and highly configurable ALPHA 900 line of military helmet systems is the only aircrew helmet platform that supports both fixed and rotary wing applications, reducing the logistics trail for those responsible for supporting both helmet platforms.



ALPHA 900

Cross-Platform Helmet Systems

Military pilot helmet system adopted by the U.K. MoD

Featuring a modern and lightweight design, the ALPHA 900 Cross-Platform Helmet System replaces U.K. and other Fielded ALPHA helmets. Designed to be configured for fixed and rotary wing platforms, the 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. The ALPHA 900 is compatible with a wide range of aircraft communication systems, NVGs, Laser Protective Visors, and other helmet system upgrades, including new Aircrew Helmet Noise Reduction (AHNR) technology for protection against increased noise exposure and longer missions (see page 34). The modern, lightweight military helmet system combines decades of experience as the U.K. MoD's design authority for aircrew helmets with the latest developments in military helmet technology.

Impact	Frequency Hz	Attenuation dB(A)	Weight in Lbs.
Not to Exceed 300G	250	7	<p>3.10 (1406g)</p>
	1000	27	
	2000	35	
	4000	41	
	8000	38	



Modern, Lightweight Design; Advanced Performance and Protection

Using an epoxy resin aramid and a carbon fiber shell, the ALPHA 900 is lighter in weight than prior models, while providing necessary impact and penetration resistance. The lighter weight, plus a streamlined design, featuring a ratcheting nape strap retention system and tensioning ear shells, provides added stability and comfort for improved aircrew performance, particularly when flying with NVGs or helmet mounted display systems.

Reduced Logistics Trail and Flexible Assets

With a common helmet shell, replaceable and serviceable spare parts, and accessories, maintainers of fixed and rotary wing assets will benefit significantly from a reduced logistics trail. This results in saved time, costs and improved deployment time of assets to aircrew. Common components also allow fleet managers to easily reconfigure helmet systems to support either fixed or rotary wing applications.

Scalable and Easily Configurable with Qualified Capability Upgrades to Meet Mission Specific Needs

With its unique scalable, modular design, the ALPHA 900 is the only helmet system configurable for fixed wing combat, non-ejection fixed wing, rotary wing, and air-to-sea search and rescue operations. Highly configurable, the ALPHA 900 allows you to easily change or add capability upgrades to meet your current and future mission requirements. With its adaptable design, the ALPHA 900 is compatible with a wide range of qualified flightworthy aircraft communication systems, NVGs, AHNRRs, oxygen masks, laser protective visors and maxillofacial shields, and other helmet system upgrades, all which can be quickly changed or added without impacting the helmet system's protection or performance capability.

Replaces U.K. and other Fielded ALPHA Helmets

The ALPHA 900 replaces the U.K. MoD's Mk4 (rotary) and the Mk10B/C (fast-jet) series of ALPHA helmets; and the 200 (rotary & non-ejection seat fixed wing), 300 (fast-jet), and 800 (SAR) series of ALPHA helmets used by over 65 Air forces around the globe.

Contact a Gentex Corporation representative at **sales@gentexcorp.eu.com** to learn more about available configuration options for the ALPHA 900.

ALPHA 900 Helmet System Configurations

With its unique, scalable, modular design, the ALPHA 900 Helmet System platform can be delivered in a wide range of fixed wing, rotary wing, and fixed/rotary wing configurations by integrating capabilities in communications, and respiratory, hearing, and eye and face protection to meet your mission specific needs. Shown below are some of our most common mission configurations.

FIXED WING



Fixed Wing Missions

Fixed wing configurations certified for up to 625 knot ejection. Minimized weight and bulk to support high-G maneuvers, the 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. Shown here with the Gentex HA/LP Oxygen Mask (page 46), flown by the majority of worldwide military forces.

ROTARY WING



Rotary Wing Missions

Shown here are two common rotary wing configurations. Depicted in the blue/gray suede color option above, this configuration includes an NVG-compatible visor housing and maxillofacial shield. The advanced fitting system keeps the helmet stable when using NVGs or other headborne optical equipment while the maxillofacial shield protects the lower face and reduces wind noise across the boom microphone (page 35).

The sand suede version above was configured for when mission requirements demand higher levels of performance and protection. It has an amber visor (page 40) for improved visual acuity; a variety of communications options can also be added, including helmet-mounted volume control and new Aircrew Helmet Noise Reduction (AHNR) (page 34) technology.

ROTARY WING / FIXED WING



Transport Missions

Our most configurable helmet system for transport aircrew, the 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. Shown here with the Gentex Boom Microphone Assembly (page 35).



DGA Missions (ALPHA 930 Series)

With over 4,000 fielded, this configuration of the ALPHA 900 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. The rotary wing configuration shown above features a lightweight, fire-resistant helmet shell and advanced night vision and lighting integration.

ALPHA 900 SAR NEW

Search and Rescue (SAR) Helmet System

World's First Waterproof Helmet System, Optimized for Air-to-Sea Operations

Optimized for air-to-sea search and rescue operations, the ALPHA 900 SAR is the world's first water-proof 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; a watertight communications downlead; and corrosion resistant hardware and nape adjustment. Optimized for interfacing to common SAR radios and configurable for all major aircraft intercom systems, the helmet also provides an additional 2 dB(A) passive attenuation (vs. the standard ALPHA 900 helmet system) for added hearing protection.



Impact	Frequency Hz	Attenuation dB(A)	Weight In Lbs.
Not to Exceed 300G	250	10	<div style="background-color: orange; color: white; padding: 5px; text-align: center;"> 3.10 (1406 g) </div>
	1000	25	
	2000	37	
	4000	42	
	8000	44	



Capability Upgrades



To enhance the performance capabilities of our helmet systems for both fixed and rotary wing aircrew, Gentex Corporation has designed an array of advanced capability upgrades that easily integrate into the helmet system without sacrificing protection. Gentex continues to leverage the unique, modular, scalable design approach of its Ops-Core brand, which creates opportunities to add even more capability upgrades and accessories. You can explore our full line of upgrades at www.gentexcorp.com/air.



HEARING PROTECTION & COMMUNICATIONS

Our comprehensive line of hearing protection and communication solutions seamlessly integrate into our fixed wing, rotary wing and cross platform helmet systems providing aircrew superior hearing protection and precise, intelligible communications in the most extreme noise environments.



HEARING PROTECTION



Gentex Ear Seals

Featuring Comply™ Foam Technology

Gentex Ear Seals are compatible with Gentex and ALPHA Helmets and use Comply ear seal technology to deliver increased mission effectiveness. The patented high attenuation foam reduces noise by 9 dB around 1KHz and by 3 dB below 200 Hz, providing advanced hearing protection and clarity in communication by enhancing passive attenuation. The extremely soft viscoelastic memory foam also reduces irritation and fatigue, remaining comfortable during extended missions; increases conformability around eyeglasses and facial features, which ensures a more complete seal minimizing acoustic leaks; provides a secure fit, which reduces pilot workload as less helmet adjustments are necessary; and limits the amount of movement when using NVGs.



Gentex LPCCE with passive tether

Gentex LPCCE

Low Profile Custom Communication Earplugs

With a 27 dB Noise Reduction Rating (NRR), the LPCCE deliver superior hearing protection and enable clear communication in extreme noise environments. The digitally manufactured, custom molded LPCCE provides a more consistent fit than standard foam eartips when used with our Argonaut® stereo communication earplugs and CEP C15 models. The LPCCE come with a passive tether enabling the earplugs to be worn as a hearing protector when use with communications earplugs are not required. Identical additional or replacement LPCCE may be ordered at a discount if new impressions are not required. Also suitable for aircraft maintainers.

AHNR NEW

Aircrew Helmet Noise Reduction Technology

DoD and MoD qualified for reduced noise exposure and improved helmet system performance

Gentex Corporation's new aircrew helmet noise reduction (AHNR) technology is DoD and MoD qualified to reduce noise exposure for aircrew flying in louder aircraft and during longer missions. Available pre-installed in compatible helmets or field retrofittable, AHNR technology can be deployed in aircraft or battery-powered configurations, and at high and low impedances, to enable use in all aircrafts. Adding or upgrading to AHNR technology in aircrew helmet systems improves aircrew hearing protection, and overall system performance.



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

Key Features

- Qualified for military use; certified by the UK MoD and US DoD
- 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 any fixed or rotary wing airframe
- Available in high or low impedance



ALPHA 900 equipped with AHRN Technology



Gentex HGU-55P equipped with AHRN Technology

U.K. MoD Qualified AHRN Technology

AHRN technology has been MoD qualified for use in ALPHA 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. Using a feedback design, the noise field is measured inside the earcup and the AHRN circuitry reacts to that noise to reduce it as it reaches the ear. Optimized for aircraft power, with a battery-powered option, offering 6 hours of continuous operation also available. AHRN-enabled ALPHA 900 Helmets have been fielded in Tornado, Hawk, and many transport and combat helicopter aircraft.

U.S. DoD Qualified AHRN Technology

AHRN technology has been DoD qualified for use in Gentex HGU-55/P Fixed Wing and HGU-56/P Rotary Wing Helmet Systems. The Gentex helmet equipped with AHRN technology employs an advanced feed-forward design to support a wide range of current and future airframes, and this new version has been updated with modern components and circuitry to greatly increase power efficiency. Using a feed-forward design, an AHRN system can be programmed to adapt the noise cancelling characteristics, depending on the ambient noise field, which allows the AHRN system to be optimized for a specific airframe, or specific phases of flight, where the spectra of low frequency and high frequency noises can be vastly different. Optimized for battery power, offering 40 hours of continuous operation, with aircraft-powered options available. The AHRN system design is the same for both Gentex helmets, except that in the HGU-56/P Helmet System a padded insert is added between the earcup and helmet shell to maintain its side impact rating. Developed primarily for F-15, F-16 and F-22 fighters, trainer and transport aircrafts, and combat helicopters.

COMMUNICATIONS

GENTEX MICROPHONES

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

Visit www.gentexcorp.com/mic for a guide to help you select the best microphone for your needs.



Capsule Microphones

Our 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.



Boom Microphones

Our suite of boom microphones streamline the appearance of headwear and allow for excellent positioning of the microphone in close proximity to the lips, which is critical for proper operation of high-performance, noise-canceling microphones. Choose our standard boom microphone, the wire boom, with serviceable design for repositioning and maneuverability; our flex boom for finer adjustment and positioning of the boom microphone element; or our wire/flex boom, which combines the features of the wire and flex boom microphones to maintain swivel functionality while allowing finer positioning of the boom. Available for all Gentex and ALPHA helmet systems.



Mask Mount Microphones

Carefully designed to operate with Oxygen and CBRN Masks, our Mask Mount Microphones withstand the rigors of the environment in the mask cavity. The mask mount microphone Gentex designed for the F-35 Program meets the highest performance requirements of the U.S. Navy and F-35 prime contractor, Lockheed Martin. See page 5 to read about all of Gentex's contributions to the F-35 Program.

CORDS



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 ALPHA helmet systems.



EYE & FACE PROTECTION

With a history in high performance optics dating back to the 1970's, Gentex Corporation is a global leader in the research, development, and manufacture of protective and performance lenses for aircrew helmet systems. Our light-management technologies protect military, civil government, and emergency-responder personnel from the latest optical threats, while enhancing mission performance through distortion-free visual acuity. And, with a systems approach to design, all visor assemblies for our lenses seamlessly integrate with Gentex and ALPHA helmets and other essential helmet system components, such as Night Vision Goggles, helmet mounted displays, and Gentex oxygen masks for the ultimate in protection and performance.



GENTEX DAZZLE

Laser Defense Eyewear

Laser threat protection for professional and private pilots

To combat the emerging laser threats that may be encountered by pilots during critical phases of flight, Gentex developed Dazzle Laser Defense Eyewear. The laser glare-reduction lenses used in the eyewear are available in day and night versions, and designed to maintain see-through color perception while providing necessary protection from green and blue commercial lasers. Laser protection is achieved through the use of special optical absorbing dye and lens coating technologies. Dazzle Eyewear is available in visor formats for Gentex rotary wing helmets, and flight-helmet compatible spectacles that are compatible with additional headborne equipment, such as Helmet Mounted Displays and Night Vision Goggles.



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



Gentex Dazzle Laser Defense Spectacles (Day Version)

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.



Gentex Laser Visor

Visible and non-visible laser threat protection. Available with standard or advanced laser lenses. Standard lenses provide protection from highly specific laser threats including 1064nm or Neodymium: Yag; Optical Densities from 4 to 6; full protection from high and low operating temperatures and scratches in surface; and options for multiple laser-line coverage. Advanced lenses provide protection from visible and non-visible wavelengths, and options for a wide range of threat profiles while maintaining high visible transmission and color perception.



Gentex EDU-7/P Laser Eye Protection Spectacles

The Gentex EDU-7/P Laser Eye Protection (LEP) Spectacles were designed under a U.S. Navy contract and offer industry-leading protection from non-visible laser threats. The frame's functional fit and style easily protect and seamlessly integrate with many of our helmets, plus display and tracking systems and other components mounted close to the eye.

VISORS (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.

GENTEX STANDARD VISOR LENSES

All Gentex standard visor lenses offer advanced protection while enhancing visual acuity.



Clear



Amber



Neutral Gray

Basic ballistic and impact protection is provided with Gentex clear visor lenses. The Amber and Neutral Gray visor lenses to enhance visual acuity in more demanding flight or terrain conditions. In addition to the protection offered by our clear visor lenses, our Amber visor lenses are engineered with yellow hue to offer basic contrast to the field of view in hazy or foggy conditions, and our neutral gray visor lenses were developed to provide sun glare protection.

GENTEX ADVANCED VISOR LENSES

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



High Contrast



Gradient

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.

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.

GENTEX VISOR ASSEMBLIES

Gentex visor lenses are designed to seamlessly fit with all our visor assemblies, each providing different levels of protection and performance. Compatible visor assemblies are available for all of our aircrew helmet systems. Many of our helmet systems also come with a visor housing, which protects visors from damage from scratches and flying debris, provides the means to adjust visor positions, and provides a stable platform for the mounting of Night Vision Goggles.



Gentex STEP-IN® Visor Assembly

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

Gentex Bungee & High Speed Bungee Visor Assemblies

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

The Gentex High-Speed Bungee Visor Assembly comes as an optional upgrade to the Gentex HGU-55/P Fixed Wing Helmet System, providing ejection safety up to 600 KEAS. Includes a friction strip on helmet brow edge roll for retention during windblast.

MAXILLOFACIAL SHIELDS

The Gentex and ALPHA Maxillofacial Shields (MFS) safeguard the lower face from rotor wash, flying debris and windblast during helicopter operations. An optional upgrade to Gentex HGU-56/P, HGU-84/P, or SPH-5® Rotary Wing Helmet Systems; ALPHA 900 Cross Platform Helmet Systems; and the ALPHA Eagle Helmet System, the MFS significantly enhances communications clarity by reducing wind noise across the boom microphone.



Gentex HGU-56/P & 84/P
Maxillofacial Shield



Gentex SPH-5
Maxillofacial Shield



ALPHA Eagle
Maxillofacial Shield



ALPHA 900 Series
Maxillofacial Shield

NVG MOUNTS

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 ANVIS Quick Disconnect

NVG Mount

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



Gentex Standard ANVIS

NVG Mount

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



Gentex Banana Bar

NVG Mount

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.



RESPIRATORY & CBRN PROTECTION

A critical component of our helmet systems, our lightweight, low profile respiratory systems, and advanced CBRN products for fixed wing platforms easily integrate with other aircrew equipment to provide aircrew around the globe complete system level protection.



OXYGEN MASKS



Gentex MBU-20/P
Oxygen Mask

The 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, this exceptional unit offers a lightweight, low-profile design with advanced, performance enhancing capabilities. Separate inhalation and exhalation valves minimize breathing resistance, while automatic mask tensioning during high-G maneuvers can be achieved through the use of the Gentex HGU-55/P COMBAT EDGE Kit.



Gentex High Altitude/ Low Profile (HA/LP)
Oxygen Mask

Designed for PBG and non-PBG equipped aircraft. Qualified and flown by the majority of non-U.S. militaries flying Gentex and ALPHA fixed wing helmet systems. The HA/LP comes in configurations to support various aircraft and services, see pages 49-50 for information about common configuration options.



Gentex MBU-20A/P
Oxygen Mask

U.S. Air Force approved non-PBG configuration with parts common to the Gentex MBU-20/P Oxygen Mask to lower the logistical burden of maintaining multiple mask configurations and spares.

OXYGEN MASKS // CONTINUED



Gentex MBU-23/P
Oxygen Mask

U.S. Navy configured oxygen mask providing optimal PPB sealing and +600 KEAS windblast protection. Typically flown with a Gentex HGU-68/P Fixed Wing Helmet System.



Gentex EFA/ACS
Oxygen Mask

Worn by EFA 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.



Gentex MiG & Sukhoi-HA/LP
Oxygen Mask

HA/LP variant designed specifically for Russian aircraft platforms.



Gentex MBU-12/P
Oxygen Mask

Legacy oxygen mask used with Gentex HGU-55/P and 68/P Fixed Wing Helmet Systems.

BAYONET RECEIVERS

The lightweight, advanced design of Gentex bayonet receivers allow for easy attachment and fitting of oxygen masks that both rotate and hinge.



Gentex R2 Rotatable
Bayonet Receiver

Standard on U.S. Air Force HGU-55/P helmet systems, the R2 Bayonet Receiver is the most versatile bayonet receiver available providing over 30 degrees of rotation to optimize oxygen mask fit in a shorter period of time with less technician effort. The R2 Receiver can be worn and hinged on either side of the helmet for easy access with a gloved hand. The perfect "plug-and-play" replacement for current bayonet receivers without modification to the helmet shell.



Gentex Anti-Snag
Bayonet Receiver

Reduces potential for snags from parachute risers or shroud lines during aircraft ejection or manual bailout.



Gentex Lightweight
Bayonet Receiver

Simple and cost effective solution for attaching oxygen masks to helmets utilizing high strength steel receivers.

TOOL KITS

A wide array of tools necessary to maintain all Gentex MBU-12/P, MBU-20/P, MBU-23/P, and HA/LP Oxygen Masks are provided in our convenient tool kit.



Gentex Oxygen Mask Tool Kit

The Gentex Oxygen Mask Tool Kit provides all of the necessary tools (7-piece tool set plus rugged case) to support maintenance of the above mentioned oxygen masks.

OXYGEN MASK COMPONENTS

Gentex's comprehensive line of oxygen mask components seamlessly integrate into our oxygen masks allowing users to configure their masks for added protection and performance based on mission needs.

LIGHTING



Gentex Oxygen Mask Light

Pictured above integrated with the Gentex HA/LP Oxygen Mask, the Gentex Oxygen Mask Light 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 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. The single white LED and filter meets the requirements outlined in MIL-ST-3009, Night Vision Imaging System (NVIS) Compatible Aircraft Lighting specification. The Gentex Oxygen Mask Light is windblast and ejection seat sled tested to +600 KEAS and is used by the USAF and multiple European countries.

MASK COMMUNICATIONS



Gentex Amplified Mask Microphone with U.S. Navy F-18 Communications Cable

Gentex offers a variety of mask microphones to match aircraft communications system requirements. Designed and manufactured to rigorous U.S. DoD military standards for use in high altitudes. The HA/LP configuration shown above includes an amplified microphone with U.S. Navy F-18 Communications Cable demonstrating one of the many ways how advanced communications can be integrated to the HA/LP mask to provide superior performance for all major aircraft platforms world-wide.

VALVES



Gentex Anti-Suffocation Valve (ASV)

Compatible with the Gentex HA/LP (pictured above), MBU-20/P, and MBU-20A/P Oxygen Masks, and utilized on the F-35 Oxygen Mask, the inspiratory activated anti-suffocation valve allows an unconscious or disabled aircrew member to breath when the mask is on the face. See pages 5-6 to read about all of Gentex's contributions to the F-35 Program.

OXYGEN MASK COMPONENTS // CONTINUED

CONNECTORS

Our oxygen connectors are built to meet or exceed rigorous U.S. Military Specifications and are the popular choice throughout the world.



Gentex CRU-94/P
Integrated Terminal Block
Connector

PBG capability reduces probability of GLOC during high performance flight.



Gentex CRU-60/P
Connector

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



Gentex B1-B
Connector

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



Gentex Quick Disconnect
Assemblies

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



Gentex 3-Pin
Connector

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

LIFE SUPPORT TESTERS

Built to rigorous military requirements, our highly capable and reliable test equipment will meet and exceed all of your needs from the back shop to the flight line.



Gentex Advanced Life Support Integrated Tester (ALSIT)

This portable, advanced test set 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.



Gentex Life Support Integrated Tester (LSIT) with Self Contained Air Source (SCAS)

Sold separately, these products combine to provide functional testing of the Gentex HGU-55/P Fixed Wing Helmet System COMBAT EDGE configuration and its derivatives, offering reliable checks for Gentex MBU-20/P and MBU-23/P Oxygen Masks, Gentex CRU-94/P Integrated Terminal Block, Gentex CRU-60/P Connector, CSU-17/P vest assembly and PBG Chest Mounted Regulator, plus various lower Anti-G garments. Sold separately, the Self Contained Air Source provides filtered air to perform all aircrew life support equipment component tests, initial fitting, and pre-flight checkout, replacing the need for compressed air bottles.



Gentex Aircrew Systems Tester (AST)

Portable; supports 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. The AST will test the Gentex MBU-23/P, MBU-20/P, MBU-12/P, and HA/LP Oxygen Masks; CRU-series regulators, including CRU-82/P, CRU-88/P and CRU-103/P; and 10 VDC, 28 VDC, Dynamic, and Electret communications sets. *Tester does not perform the initial fitting.*

CBRN RESPIRATORS

GENTEX

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 Communications Conversational Unit (CCU®). The CCU enables clear communication from pilot to riggor 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. The comfortable lightweight system is completely man-mounted and requires no aircraft modifications or power. The TACAIR System was 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.



GENTEX **NEW**

Low Profile Particulate Respirator

Compatible with ALPHA 900 Cross-Platform and HGU-56/P Helmet Systems, this low-profile, half-mask respirator offers 99.97% filtration efficiency against a wide range of particulate contaminants encountered by doorgunners and other rear aircrew, including lead, Asbestos, lubricant mist, and explosive gunfire residue. Won't interfere with operator's tactics, techniques, and procedures, and seamlessly interfaces with other headborne equipment and weapon systems. Two exhalation valves for easier breathing; front mounted inhalation valves and cartridge ports for enhanced FOV and quick one-handed filter change; fully encapsulated mask microphone offers greater communications clarity by reducing wind noise.



ADDITIONAL CAPABILITY UPGRADES

Gentex offers additional upgrades to enhance comfort, performance, and protection while extending the useful service life of your helmet systems. You can also visit our authorized distribution partners at www.gentexcorp.com/distributors for additional product enhancements and accessories to optimize your flight equipment.



GENTEX

HGU-56/P Improvement Kit

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

Upgrade an existing Gentex HGU-56/P Rotary Wing Helmet System and benefit from new features at a fraction of the cost of a new helmet. The HGU-56/P 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. An 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.



COMFORT LINERS

Designed to provide exceptional comfort and stability with low maintenance, our helmet comfort liners allow users a custom fit to a wide range of head contours.



Gentex 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.



Gentex TPL®

Custom-fitting Thermal Plastic Liner (TPL) provides comfort and high stability during aircraft maneuvering and acceleration.



Gentex Super Comfort Liner

Same protective/retention benefits of Gentex's TPL plus enhanced comfort with a more plush cover padding.

CHINSTRAPS

Our helmet chinstraps are manufactured to rigorous military specifications to ensure the highest levels of safety, retention, comfort, and service life.

Gentex D Ring Chinstrap

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



Gentex 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.



HELMET BAGS

Designed to greatly extend the life of your helmet, our helmet bags provide much needed storage for flight publications, gloves, or other vital accessories.



Gentex Standard Helmet Bag

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



Gentex 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.

Aircraft Maintainer Hearing Protection & Communications Equipment

Our comprehensive line of hearing protection and communications solutions provide aircraft maintainers superior hearing protection and precise, intelligible communications in the most extreme noise environments, allowing them to focus on pre-flight operations on the flight line, so pilots can safely and effectively complete their mission.





Aegisound Digital Active Noise Reduction (DANR) Triple Hearing Protector and Communications Headset (THPC)

37 dB equivalent NRR; our top-of-the-line product for combined communications and hearing protection in extreme noise environments ≥ 140 dB. Superior digital noise canceling microphone technology enables 2-way communications in the highest ambient noise fields. System: The Headset System, comprised of the DANR THPC Headset (w/detachable battery, integrated processor electronics) and our most capable broadband DANR Custom Communication Earplugs, provides three levels of hearing protection and meets the highest performance requirements of U.S. Navy and F-35 prime contractor, Lockheed Martin. CE marked. See pages 5-6 to read about all of Gentex's contributions to the F-35 Program.

Aegisound DANR Triple Hearing Protector (THP)

32 dB NRR; hearing protection in noise environments ≥ 140 dB. A circumaural hearing protector (w/detachable battery, integrated processor electronics) and our most capable broadband digital active noise reduction (DANR) custom communication earplugs provide three levels of hearing protection. Meets the highest performance requirements of U.S. Navy and F-35 prime contractor, Lockheed Martin. CE marked. See pages 5-6 to read about all of Gentex's contributions to the F-35 Program.



Gentex Low Profile Custom Communication Earplugs (LPCCE)

27 dB Noise Reduction Rating (NRR) for superior hearing protection and clear communication in extreme noise environments. The digitally manufactured, custom molded LPCCE provides a more consistent fit than standard foam eartips when used with our Argonaut stereo communication earplugs and C15 CEP models. With passive tether, may worn as hearing protector when use with communications earplugs isn't required. Chemical resistant. Reorder with a discount and without new impressions. *Also suitable for aircrew.*



Aegisound CTE30X Custom, Solid, Coiled, Tethered Earplugs

29 dB NRR, state-of-the-art, custom molded hearing protectors for comfort, consistent fit and protection in extreme noise environments. Separate and clip into cups of Aegisound DC2 Hearing Protection Headset to reduce FOD hazards for an integrated double hearing protection system. Chemical resistant. Reorder with a discount and without new impressions. *Also suitable for aircrew.*



Aegisound Argonaut Double Hearing Protection with Communications (DHPC) Headset

32 dB NRR. Designed for maximum performance in military noise fields up to and exceeding 125 dB, the digital noise-canceling microphone technology offers maximum speech intelligibility. Muzzle and boom microphone versions available, along with a variety of radio interfaces. Coupled with the Gentex LPCCE, this completely integrated double hearing protector offers excellent noise protection and simultaneous clear communications. Military hardened for extreme environmental and EMI conditions.



Aegisound 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, and can be worn in combination with Aegisound CTE30X Custom Earplugs to achieve a 35 NRR.



Gentex APC-2G Helmet System

When maintainers need head protection combined with hearing protection and communications ability, they turn to the Gentex APC-2G Helmet System. This fully integrated system accommodates most traditional over-the-head hearing protectors and communication systems while maintaining head protection standards.

KEY FEATURES

- Meets/exceeds ANSI Z89.1 standards:
 - **Type I** (top impact protection) construction meets or exceeds MIL-STD-810F environmental standards.
 - **Type II** (top and side impact protection). Tested for impact resistance with and without over-the-head headsets.
 - **Type II Class C** (Conductive); however, will comply with Class G Electrical Test per CSAZ 94.1.
- Compatible with all Aegisound and most commercial hearing protectors.
- Accessory NVG mount is load balanced so no counterweight is required.
- Goggle loop-strap attachment design prevents helmet parts from detaching and becoming Foreign Object Debris (FOD).
- 21% improvement in heat dissipation and evaporative cooling, and fewer maintainable parts than legacy cranial designs (bump caps).
- Hearing protector doesn't attach directly to the helmet so hearing protection is not affected by the fit of the helmet or other system components and vice versa
- Reflective tape and other optional features, including NVG mount, come factory installed.
- 3 (M, L, XL) sizes (comfortably fits 95% of the population).
- 7 colors (blue, white, brown, purple, yellow, red, green)

RECOMMENDED REPLACEMENT SCHEDULE & PARTS

GENTEX/ALPHA HELMET SYSTEM COMPONENTS/ASSEMBLIES

Maintain the protection and performance levels of your Gentex/ALPHA helmet system and extend its use by replacing worn out components and assemblies with genuine Gentex/ALPHA 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/ALPHA authorized service and repair centers are available to assist you with the inspection and repair/replacement of Gentex/ALPHA helmet system components/assemblies. For more information, contact Gentex Corporation, or one of our authorized distributors.

PURCHASE GENUINE GENTEX/ALPHA PARTS

To ensure the quality and performance of your helmet system, purchase factory-certified replacement parts through Gentex/ALPHA authorized distributors. For a list of distributors, visit www.gentexcorp.com/distributors.



Gentex/ALPHA 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 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

GLOBAL OPERATIONS, SALES OFFICES, AND AGENTS

Supporting militaries in the U.S. and around the world for over 100 years, at Gentex Corporation we work to serve our customers wherever they need us. 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.

GET THE POWER OF GENTEX CORPORATION LOCALLY

Partner with a local authorized Gentex Corporation distributor/agent get our industry leading products plus all the benefits of working with a local company. To find a location near you visit

www.gentexcorp.com/contact.







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Aircrew & Aircraft Maintainers High Performance Flight Equipment
PRODUCT CATALOG REV 4.0

Front cover photo by Lockheed Martin

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