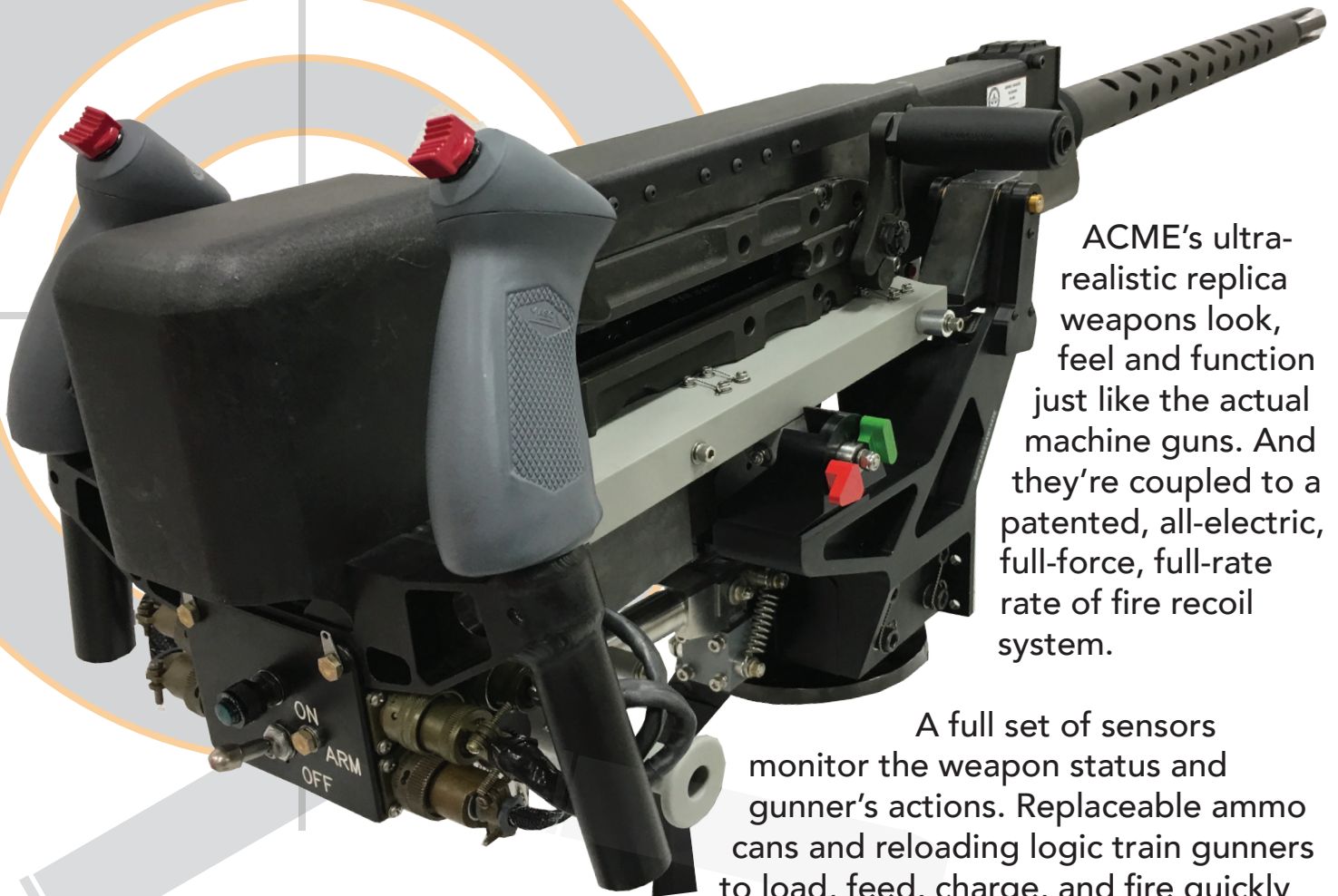


ACME WORLDWIDE ENTERPRISES
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(505) 243-0400

WWW.ACME-WORLDWIDE.COM

GAU-18

REPLICA WEAPON TRAINING SYSTEMS
PATENT # 8690575 B1



ACME's ultra-realistic replica weapons look, feel and function just like the actual machine guns. And they're coupled to a patented, all-electric, full-force, full-rate rate of fire recoil system.

A full set of sensors monitor the weapon status and gunner's actions. Replaceable ammo cans and reloading logic train gunners to load, feed, charge, and fire quickly and correctly.

Insertable jams, runaways, sluggish fire, and misfires prepare gunners to deal with worst-case weapon issues.

REALISTIC REPLICA WEAPON...

REALISTIC RECOIL...

REALISTIC TRAINING!

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GAU-18 .50 Caliber

COMPLETE REPLICATOR WEAPON SYSTEM INCLUDES:

- Replica Weapon – Ultra realistic GAU-18 weapon with sensors
- Gun Active Recoil (GAR®) Cradle – Weapon Cradle with integral, patented, all-electric, full-force, full-rate-of-fire recoil
- Electronics Chassis – Provides power and electronic drives for gun sensor and recoil system
- Weapon Mount – Can be a tripod or specific aircraft mount
- Power and Signal Cables – Standard 25' Cables allow weapon training away from remotely located electronics and power source
- Technical Data Package – Standard Operations & Maintenance Manual, Interface Control Document, Acceptance Test Procedures
- Warranty – One-year, Return-to-Factory warranty protects the product

NOT AN ACTUAL WEAPON!

Realistic replica is a non-gun, not a firearm, and can't be made to load or fire a round. Replica emulates form, function, grips, controls, weight, and balance. Inert ammo can be fed into the body.

SENSORS

- Trigger
- Charging Handle
- Top Cover
- Ammo Present
- Safety
- Bolt Back

OPTIONS

- Muzzle Flash
- Jam Round Light
- Barrel Removal
- Replica Laser
- Ammo Chute
- Charging Cable

ENCODERS

- Azimuth Position
- Elevation Position

MALFUNCTIONS

- Misfire
- Jam
- Runaway
- Cookoff
- Sluggish Fire



RECOILS AT 700-750
ROUNDS PER MINUTE



CONTACT US TODAY FOR DETAILS

Gun Active Recoil (GAR®)

GAR® PATENT # 8690575 B1

The Gun Active Recoil (GAR®) is ACME's patented, all electric system that provides full-force, full-rate-of-fire weapon recoil. The GAR® System is built into the weapon cradle. The GAR® System in the GAU-18 is integrated within the weapon body and the recoil force is felt at the grips.

The ACME GAR® uses a 220 VAC (20 A) input and a standard Ethernet interface to the user's computer system.

The all-electric system uses standard AC wall power, not pneumatics or blank cartridges. No pneumatics means:

- No compressed gas and gas support systems such as compressors, hoses, storage tanks
- No water or contaminant filtering
- No leaks
- No compressed gas hazards
- Realistic, full-force, not notional recoil



FULL FORCE RECOIL
AT FULL RATE OF FIRE

Why ACME GAU-18 Replica Weapons?

PROVEN, DEPENDABLE TRAINING SYSTEM

Great training capability is the prime requirement. The customer may have additional needs for the gunnery training system like infrastructure, logistics, storage, and simplified procurement. Here's how the gun system meets or exceeds those needs too:

- **Eliminate the hassle of armory storage**, check-out/check-in and continuous physical security for actual weapons.
- **Replica weapons are Non-Guns, NOT firearms.** Replicas can't be made into firearms. No need to store in the armory.
- **Simple, straight-forward power system.** No messy, intensive pneumatics, no plumbing/wiring changes to the office building.
- **Replica weapon system plug rights into the office wall.** Simple, dependable, all-electric system.
- **Proven and in use by US military now-*not* a development project**
 - More than 300 ACME replica weapons systems delivered.
 - In training use with US Army, Air Force, Navy, Marines, and Coast Guard.
- **Plug-and-play system.** No time/money required for development, and no costly or demanding integration.
- **Self-contained system includes fully integrated hardware, software, firmware, and instructor application.** Set up and fire!
 - ACME has specialized skills with aerial gunnery trainers.
 - More than 16 years experience with helicopter gunnery trainers including CH-46, CH-47, H-60, UH-1, CV-22, H-65, & EH-101.
 - Delivered replica helicopter guns training systems for M2, M60, M240, GAU2, GAU18, M3M, M134, XM218.
- Simple procurement process and commercially available.
 - Buy right-off-the-shelf by Part Number.
 - Buy using a credit card if desired.

WEAPONS EASILY MATE WITH VISUAL & TARGETING SYSTEMS

ACME's stand-alone Replica Weapon Training System is excellent for training weapons handling and use and response to malfunctions. The system can also be easily integrated to a visual and targeting system that enables airborne gunners to engage targets below.

Proven:

Products not Prototypes

ACME Gun Training Systems in use for:

CUSTOMERS

- US Coast Guard
- US Army
- US Navy
- USMC
- Air National Guard
- Canada Air Force
- Royal Navy

TRAINERS

- Ground Simulators
- Vehicle Simulators
- Shipboard Simulators
- Helicopter Simulators
- Armored Vehicle Sims

TRAINING

- Basic Weapon Skills
- Marksmanship
- Mission Training
- Malfunction Training
- Adversary Threat
- Convoy Training

VISUALS

- Virtual Reality
- Augmented Reality
- Direct View Displays

GAU-18 Replica Weapons for Helicopter Trainers



FIRING POSITIONS

- Window Mounts
- Door Mount
- Ramp Mounts

SPECIAL FEATURES

- Correct Fields of Fire
- Weapon Stow Mechanism
- Windloading Systems

SPECIAL OPTIONS

- Laser Illuminator Replicas
- Muzzle Flash
- Spent Round Containers
- Remote Ammo Cans
- Ammunition Feed Chutes
- Ammunition Can Motors
- Spent Round Chutes
- Reconfigurable Mounts
- Adjustable Fields of Fire

COTS SYSTEMS

- MH-60 Mounts
- MH-53 Mounts

LOOKS, FEELS, FUNCTIONS LIKE ACTUAL HELICOPTER WEAPONS

ACME's complete Replica Weapon System for helicopter gunners look, feel, and function like the actual helicopter weapons. ACME emulates the specific aircraft mounts that are tailored to match the firing position (window, door, ramp, left, right or right) too. ACME's mounts can be built to be reconfigurable too with adjustable azimuth and elevation stops. The mount can also be set for variable azimuth and elevation to accommodate firing limitations like external loads, fuel tanks or ordnance racks.

The gunner can sweep the correct field of fire in azimuth and with the windloading system, feel the airstream loads on the weapon. Realistic recoil helps gunners train to anticipate, adapt and overcome to keep the weapon on target.

GAR

Patented
Recoil system



Realistic Recoil
at the Grips



Realistic Rate
of Fire



Full Suite of
I/O Sensors



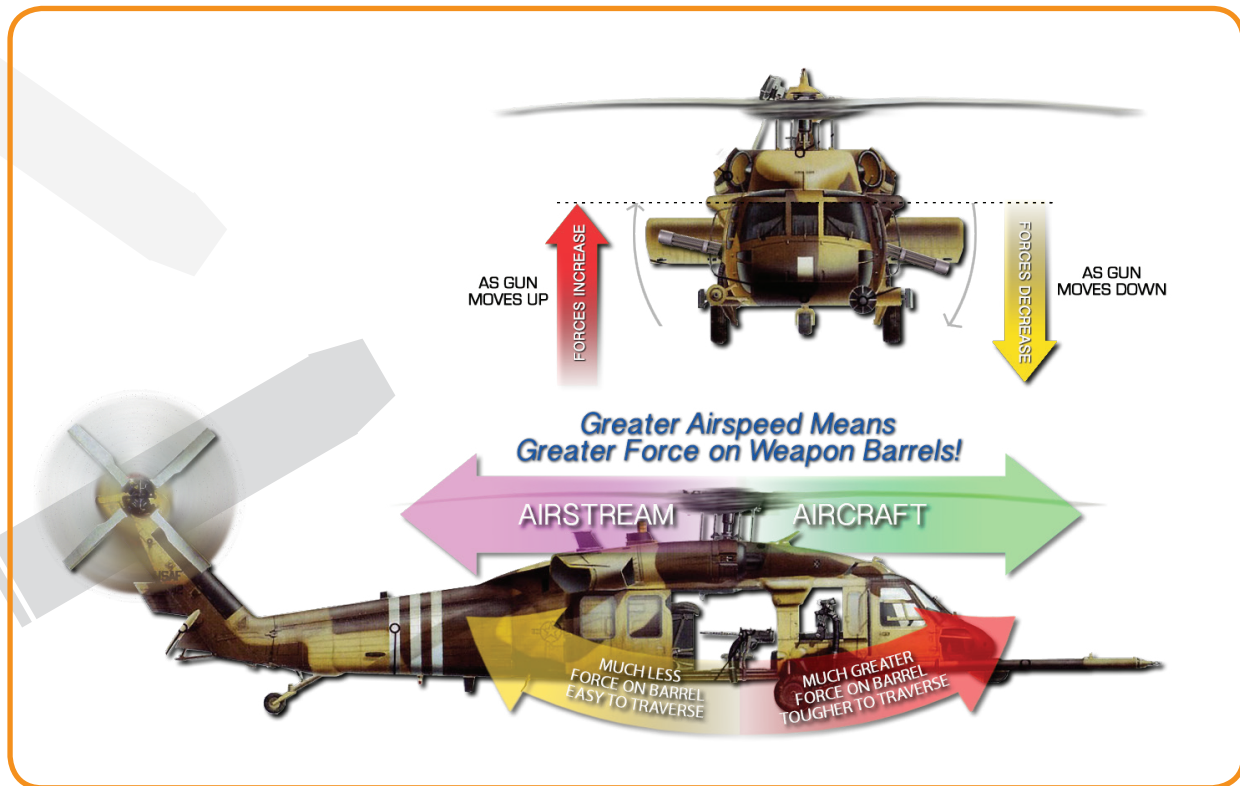
Variable Torque
for Wind Forces

Windloading System

REALISTIC AIRSTREAM FORCES ON THE WEAPON

Weapons protruding from aircraft doors or windows are subjected to varying wind-loading from the airstream that is proportional to the speed of the aircraft in flight and the airstream angle-of-attack on the weapon.

Door gunners must compensate for this varying wind-loading that affects the ease and speed at which gunners can sweep the weapon against the airstream as they keep the weapon on target. Gunners must also adapt as the airstream loads decrease and the weapon forces changes, often suddenly. This windloading effect is an important requirement for realistic and effective door gunner training.



ACME's windloading uses an electro-mechanical system driven by internal software that provides variable torque resistance to the weapon mount to replicate airstream loads on the weapon. The system translates aircraft airspeed and the weapon angle of attack on the airstream vector to determine the proper torque applied to the weapon.

The system incorporates an additional motor/gearbox integrated into the azimuth pivot of the mount and driven by an additional electronics drive in the chassis. Still just one chassis to drive the gun.

Training with ACME's GAU-18 Replica Weapon

Versatile:

One Weapon System
Many Training Options

WEAPON HANDLING TRAINING

Use ACME's Replica Weapon System to train and practice basic weapon handling skills including preflighting the weapon for use, arming/safing, loading, grips, charging, aiming, sight pictures, dry fire, trigger control, burst firing, and reloading. Teach new gunners how to prepare for and overcome the effects of recoil. Use the replica weapon as a first line of training to cement the fundamentals long before going to the armory or range with an actual weapon.

EMERGENCIES/MALFUNCTIONS TRAINING

Use the ACME Replica Weapon System to train gunners to successfully respond to and overcome weapon malfunctions. Practice safely with a full range of malfunctions that simply can't be accomplished with actual weapons. Easily insert a malfunction to teach students to immediately identify the failure. Insert a series of malfunctions to validate student skills during their solo check-outs to qualify on the weapon.

TARGET TRAINING

Practice engaging targets cost-effectively with unlimited, 'virtual' bullets. Save millions of dollars in ammunition, weapon, and range costs. Teach firing patterns and lay down fire in response to specific targets and situations. Add in the windloading torque to practice dealing with the forces on the gun in flight.

MISSION TRAINING

Put all the gunnery skills together to practice specific missions with ultra-realism. Limit ammunition to mimic as-actual, on-aircraft quantities. Add in realistic targets and engage while 'airborne' in the simulator while dealing with wind-forces and night-vision equipment. Practice crew-resource skills between gunners and pilots. Then, add in a realistic malfunction to ensure crews can deal with the emergency *and* the mission needs successfully.

WEAPON SKILLS

- Weapon Preflight
- Safety Inspections
- Arming/Safing
- Loading
- Ammunition Feed
- Charging Techniques
- Aiming
- Trigger Control
- Burst Firing
- Leading Targets
- Suppression Fire

MALFUNCTIONS

- Jam
- Cookoff
- Runaway
- Sluggish Fire
- Misfire

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