

# M-346

## SPECIFICATION SHEET

### COMPLETE DYNAMIC MOTION SEAT SYSTEM *INCLUDES*

- Ultra-high fidelity replica ejection seat with multi-channel motion system built inside. Suite of internal sensors manage seat status.
- Electronics Cabinet with computers, control chassis, maintenance monitor, and power distribution.
  - Single computer can drive pilot and copilot seats and the G-suit System. Executable, embedded software translates flight simulator signals into motion and G-suit commands.
  - Power and signal cables connecting seat and electronics.
- Interface, Test, and Maintenance Manuals to install, maintain, and support the system.
- Standard Warranty protects the investment.
- Optional pneumatic system providing on-demand, filtered, pressurized air and vacuum for G-suit and Mask Air Systems. All valves, filters, tanks and hoses included.



(Patent #8827709)



## Motion Cues are *Training* Cues



**Ordnance  
Effects**



**Speedbrakes  
& Flaps**



**Formations &  
Wakes**

**Engine  
Effects**



**Taxiing  
& Braking**



**Take-off &  
Landings**



**G-Cues**



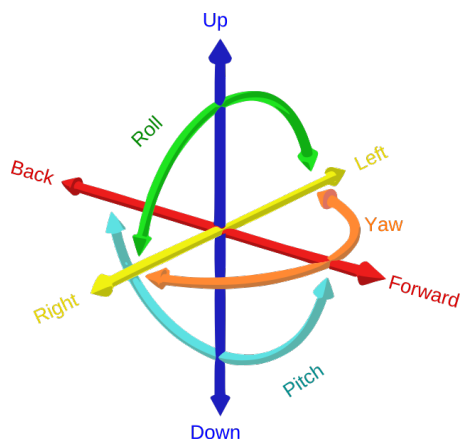
## Feel all these effects and more in an ACME Dynamic Motion Seat

ACME Motion Seats include up to 20 specialized buffets and impacts customized for the user. The seats provide cues across the full mission – start up to shutdown. It provides complete range of flight cues like pitch roll, yaw, onset and sustained g-cues and more. Get those critical motion cues for new pilot training like sink-rate, aircraft energy, engine vibrations, turbulence effects from the weather and the wingman, touchdown, braking, landing gear extension, aircraft malfunctions and more. Provides the critical g-cues that motion platforms simply can't provide.

PITCH, ROLL, YAW, DIVE, CLIMB, ACCEL/DECEL, G-CUES

## MULTI-CHANNEL MOTION CUEING

EYE-POINT CORRECTION, ACTUATED HARNESSES



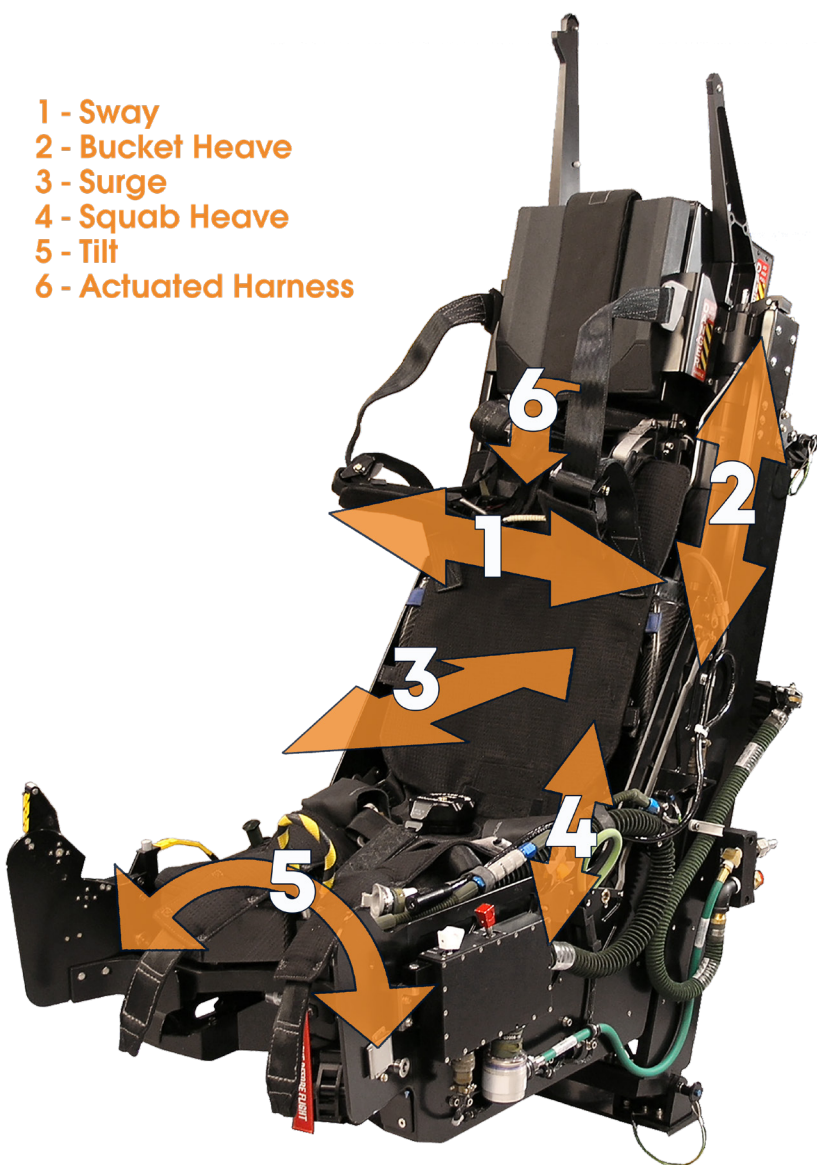
- 1 - Sway
- 2 - Bucket Heave
- 3 - Surge
- 4 - Squab Heave
- 5 - Tilt
- 6 - Actuated Harness

### ACME Motion Seats provide full 6-DOF cueing

Cueing in all 6 Degrees of Freedom 6-DOF is critical to effective fighter flight simulation. Realistic cueing is much more than just individual motion axes.

True Q<sup>®</sup> Dynamic Motion Seats use a combination of motion channels working in a continuous, seamless concert to provide realistic, immersive 6-DOF cueing.

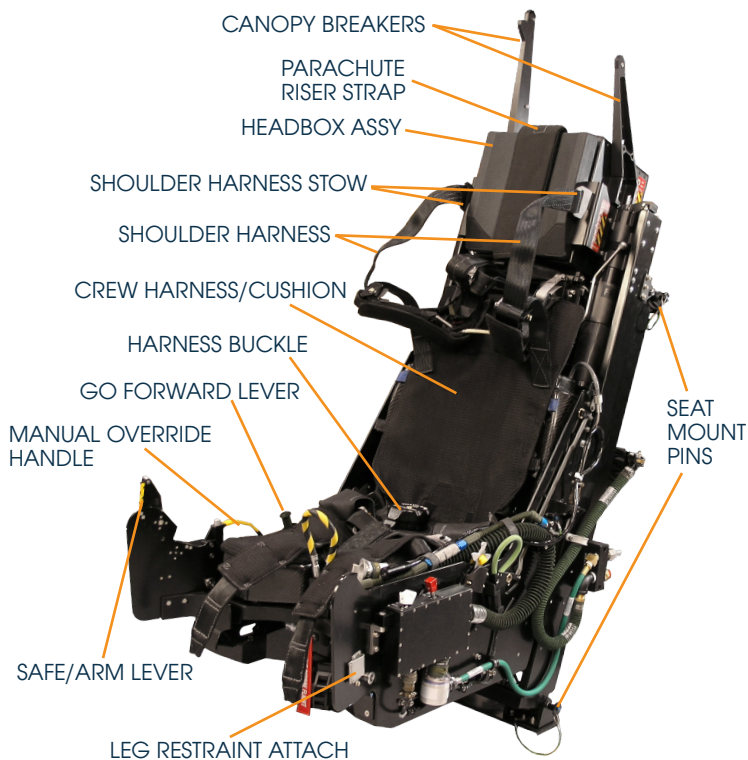
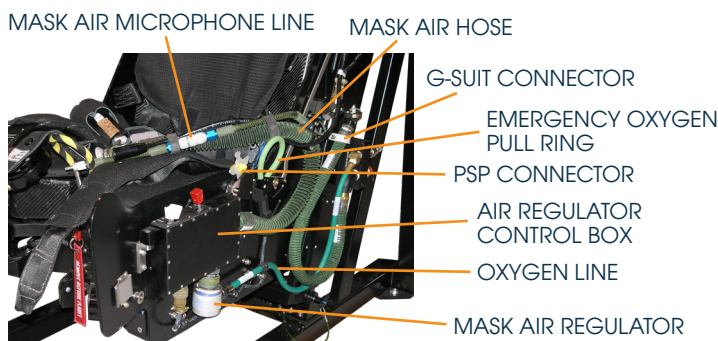
Motion cues coupled with replica G-suit System provides exceptional cues for both g-force onset sensations and sustained g-loads. It's the best g-cueing available outside the aircraft or the enormously expensive centrifuge.





## LOOKS, FEELS, & FUNCTIONS LIKE THE ACTUAL EJECTION SEAT

HIGH FIDELITY REPLICATIONS OF THE ACTUAL EJECTION SEAT WITH ALL-ELECTRIC MOTION CUEING BUILT-IN TO THE SEAT.



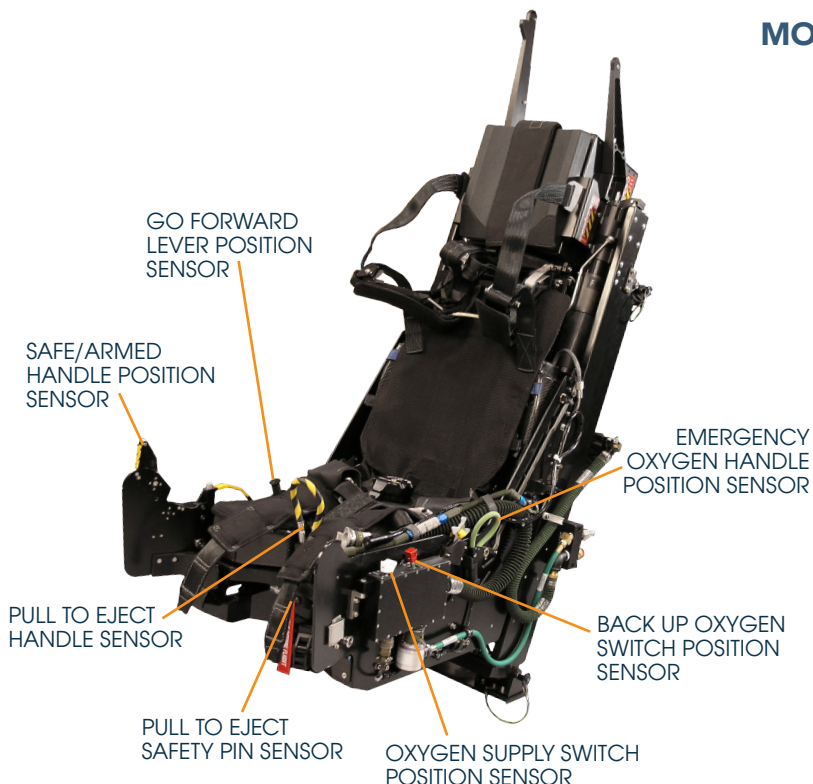
## Sensor Suite

MONITOR, MANAGE, & CONTROL SEAT STATE

### REAL TIME SEAT STATE MONITORING

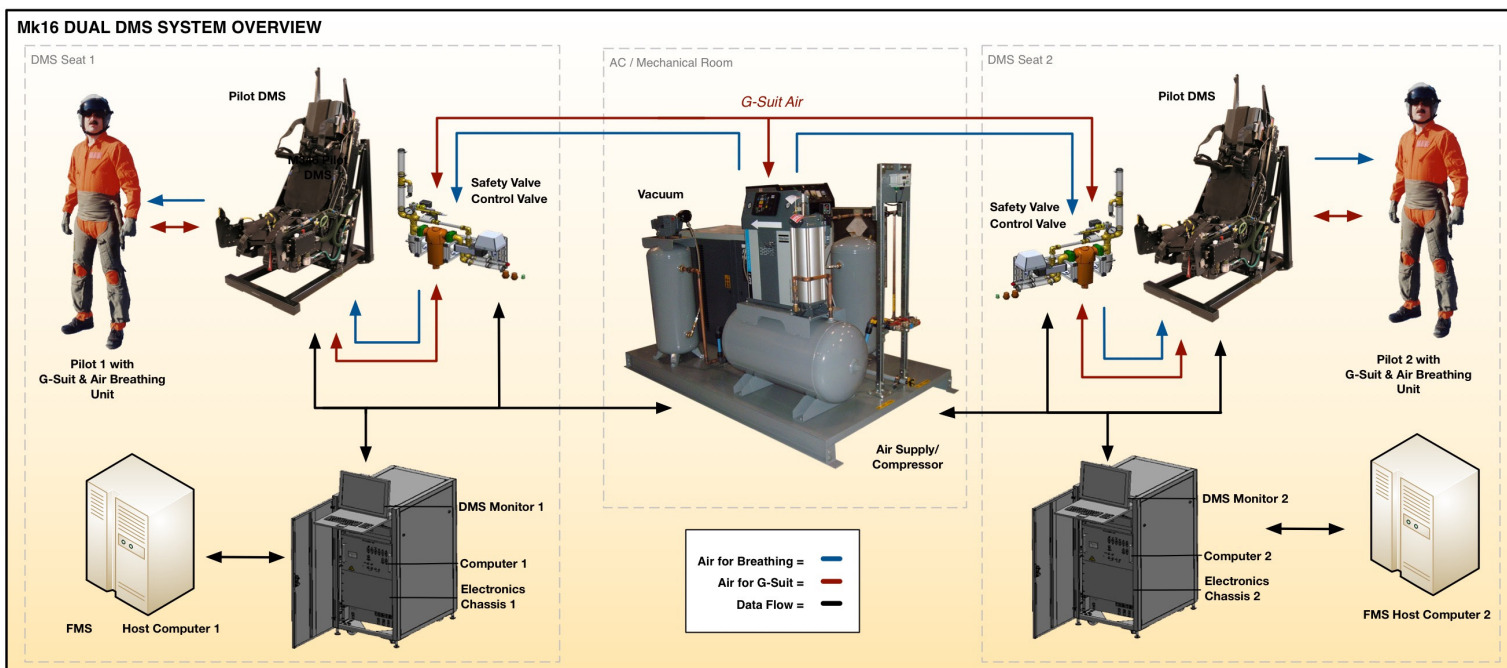
SENSOR SUITE MONITORS EACH OF THE ARMING AND SAFING CONTROLS.

INSTRUCTORS CAN CONFIRM PILOTS ONLY ENTER A COCKPIT WITH A SAFE SEAT OR THAT THE SEAT IS 'ARMED' FOR EJECTION BEFORE FLIGHT.



## SYSTEM DIAGRAM

WITH OPTIONAL G-SUIT & MASK AIR SYSTEMS SHOWN

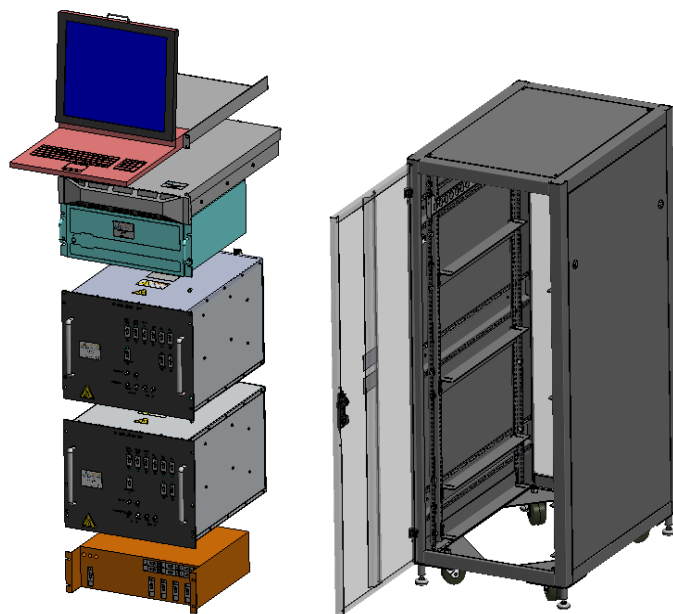


Complete system includes all the components needed to translate acceleration signals from the flight model into realistic motion cueing. System includes executable software to drive the seat system. One computer can drive it all: The motion seat computer can support two seats using the same flight model (Pilot/Co-Pilot) and the Optional G-Suit and Mask Air systems.

## ELECTRONICS

PILOT & COPILOT CABINET SHOWN

- Replica Seat with Motion System and Sensor Suite
- Electronics Cabinet including
  - Motion Seat Computer with executable software
  - Electronics Chassis to drive the seat
  - Keyboard/Video/Mouse
  - Power Distribution Unit
  - Power and Signal Cable Set
- Technical Documentation Package
  - Operations and Maintenance Manual
  - Acceptance Test Procedures
  - Interface Control Document
- Standard, one-year, return-to-factory warranty





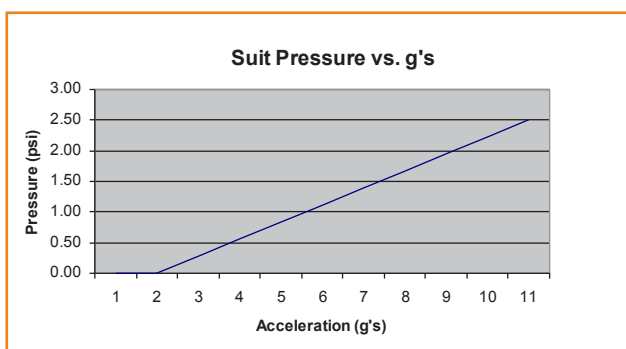
## TURN-KEY G-SUIT SYSTEM PROVIDES PRESSURE & VACUUM FOR EXCELLENT G-FORCE CUEING

Complete system includes the high-flow compressor, pressure and vacuum tanks, controllers, filters, valves and more. Entire system is easily controlled via the DMS Computer and needs no direct inputs during 'flight' operation. Extended cables and hoses enable the pneumatic pallet to be remotely located from the cockpit such as in a utility room. Valves on board the cockpit provide direct connection to crew g-suit ensembles.



## VARIABLE PRESSURE FOR G-CUEING

ACME's G-Suit System connects right to an actual g-suit pants/vest ensemble and provides variable pressure to correspond to simulated g-forces in flight. The G-suit System is easily controlled via the DMS Computer and needs no direct inputs during 'flight' operation.



*notional not actual*



**505.243.0400**  
**ACME-Worldwide.com**