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48-033

**Mountain Home's  
Gunfighters**  
33rd Fighter Squadron Minnesota

**WHAT'S OUT THERE?**  
1/48 Hasegawa F-16C Fighting Falcon  
Black Box F-16C Cockpit Set  
Ariwaves Detail Set  
Eduard F-16C Detail Set  
Eduard Canopy and Wheel Masks  
Cutting Edge Canopy and Wheel Masks  
Flightpath ALQ-131 ECM Pod



FD56118

Testors MM 1723

Humbrol Hr125

Gunze Sangyo H305

Xtracolor X130

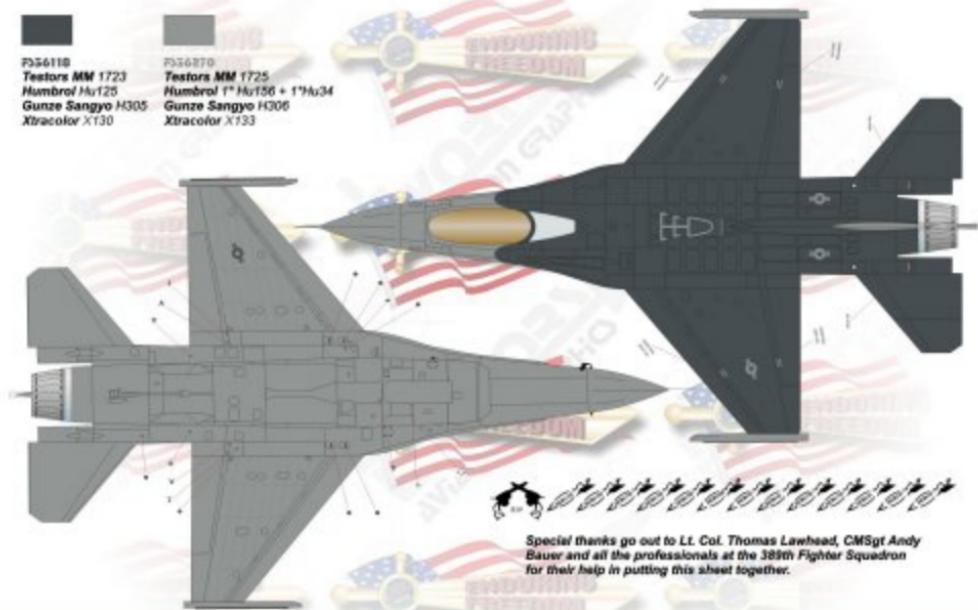
FD56170

Testors MM 1725

Humbrol 1<sup>st</sup> Hu156 + 1<sup>st</sup> Hu34

Gunze Sangyo H306

Xtracolor X133



**Special thanks go out to Lt. Col. Thomas Lawhead, CMSgt Andy Bauer and all the professionals at the 389th Fighter Squadron for their help in putting this sheet together.**

### GBU-31 and CBU-103 In Combat

The 389th Thunderbolts from Mountain Home AFB, Idaho, were the first F/A-18s to ever use the aerial Corrected Munitions Dispenser (WCMD) and GBU-31 in combat.

Captains Bill Anderson, commander of the 389th Air Expeditionary Group, Captain Peter Koenig with the 389th Fighter Squadron, became part of the initial strike team on the first strike to employ the GBU-31 Joint Direct Attack Munition (JDAM) from a F/A-18 Hornets on November 29, 2001 in Afghanistan with Syria and Jordan in support of Operation Enduring Freedom.

Captains Mark Pfeifer and Mark Mihnev also had the honor of being the second strike team to employ the GBU-31 to drop the CBU-103 WCMD in combat November 30, 2001.

The JDAM and WCMD are the first of a new breed of aerial munitions designed to make user aircraft easier to find their targets.

The JDAM can be employed at night and during bad weather and can be used in all weather. These unique qualities mean there is no need for expensive precision guidance equipment or sensors.

The JDAM uses an internal GPS receiver.

In a tail kit that allows it to find its target totally autonomous from the launch platform.

During Desert Storm, the USAF was getting less than acceptable results when employing the CBU-97 and 97 cluster munitions. These munitions were unreliable and inaccurate due to the inherent error in trying to intercept Circular Error Probability (CEP) of striking its target. This attack profile exposed the enemy to the numerous RAM and AAA hits that were in the area, increasing the attacking aircraft's risk.

When the USAF began to employ the JDAM, combined with the correct weapons also increased the CEP of these weapons and the accuracy was unacceptable.

The WCMD tail kits compensate for ballistic errors and while still using the CBU-97, 99 and 97 cluster munitions, hit a very accurate weapon. These munitions can now be dropped from higher altitudes with devastating results.

There were four typical loadouts that were flown by the 389th Fighter Squadron during their deployment. These included: Operations Enduring Freedom, Strike, and Counter-Strike.

1. GBU-31 and GBU-12 AMRAAM

2. GBU-31 and 1 X CBU-103 (CBU-87 with WCMD kit)

3. GBU-31 and 200 gal. Fuel Tanks

4. GBU-31 and 200 gal. Fuel Tank

5. GBU-31 and 200 gal. Fuel Tank

6. Full load of HEDP

7. GBU-31 and 6 AIM-120 AMRAAM

8. GBU-31 and 1 X CBU-103

9. GBU-31 and 200 gal. Fuel Tanks

10. GBU-31 and 200 gal. Fuel Tank

Carried this loadout when WCMDs were expended.

4. GBU-31 and 6 AIM-120 AMRAAM

5. GBU-31 and CBU-103

6. GBU-31 and 200 gal. Fuel Tanks

7. GBU-31 and 200 gal. Fuel Tank

8. Full load of HEDP

Used GBU-31 as a targeting pod. One instance was shot down during employment.

Mission accuracy markings agency one marking for every mission drop, and which munition was printed inside the drop. The crossed pistols on CEP 80% signify that the gun was used and how many rounds were expended.

Thanks to CMSgt Andy Bauer for the valuable information.

### Wind Corrected Munitions Dispenser (WCMD)

#### Description:

The Wind Corrected Munitions Dispenser (WCMD) is an inexpensive tailkit that turns existing cluster munitions (CBUs) into precision-guided weapons. By compensating for launch transients, ballistic errors, and winds aloft, the WCMD provides strike aircraft with an accurate guided loiter-capability for cluster munitions in any operational climate or weather condition.

The low-cost dispenser/guidance kit consists of an inertial measurement unit, active control electronics, and precise wind estimation and compensation algorithms.

The "one size fits all" dispenser provides for common software, kit hardware, and common programming. The WCMD is designed so each weapon can be independently targeted to achieve maximum operational effectiveness.



WCMD Tail Kit

#### Features:

Autonomous, all weather combat operations  
Compatable with all Air Force strike aircraft  
All altitude and off-axis delivery  
Preplanned and in-flight mission planning  
Independently programmable for attacking multiple targets simultaneously  
Real-time wind compensation to achieve accurate dispense point  
Precision ground impact placement and dissemination density  
Centralized refit/reload for inventory weapon



#### Specifications:

Accuracy - Circular Error Probability (CEP)

CBU compatibility -

CBU-87 CDM

CBU-97 GATOR

CBU-97 SPIN

CBU/WCMD Exploded View

International and Single Inventory #  
Lockheed Martin Corp.

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Being modelers ourselves, we understand that there is no substitute for this painstaking research and we are proud to offer what we feel are the best decals on the market. If you have any subject matter that you feel should be the next TwoBobs creation, let us know. We'll be happy to listen to any and all customer input.