Operation Iraqi Freedom
Joint EW Architecture
Most advanced ever – TES, DSN CNF Bridge, pagers, AC10, WOTS, ADSI, C2PC, AMDWS, AEGIS, COBRA JUDY

1st ever Wartime Coalition Patriot Operations
No loss of life or equipment due to an Iraqi TBM 9 for 9

Joint Attack Operations
Successful finding, fixing and killing Enemy TBM

EW provided to Kuwait. Activated 170 Sirens
1069 Missiles Moved

Multi-service SADCs
LARs, MIRs, OAIs combat multipliers!

“PLAYBOOK” Reinforce Maneuver coverage approved by LTG McKiernan

CZAR of Operational Protection (MP, NBC, ADA)

45 CH47 Sorties to deliver supplies

1st employment of Battery Command Post (2 BNs)

AEGIS, COBRA JUDY

1-7 ADA
15 C-5s, 21 C17s
Largest movement of Patriot by air

Joint Area Air Defense Plan

1st Ever support of the USMC by a Patriot Brigade

Innovative use of Float equipment – “Shortstop”

LNOs in 6 countries

UNCLASSIFIED (DESTROY AS OPSEC SENSITIVE)
Desert Storm –vs- Iraqi Freedom

What was Different?

- 270 degree coverage
- 270 degree operations
- 32d AAMDC
- Force Modernization - Systems (PAC II/PAC III)
  - Missiles (GEM, GEM+, PAC II, PAC III)
  - BCP’s, Remote Launchers, Link 16
    - 14J and 140A
- Corps Bde Operations
- Separate Battalion Missions-
  - 1-7 ADA Jordan, 1-1 ADA 4ID
- CFLCC/CFACC Roles
- Separate Batteries in Many Countries
- Short Range TBMs, Cruise Missiles
- MEF Operations
- Offensive Operations – integrated with CAOC
- Expectations - high
  - Leak Proof Defense
- AC/RC Integration
  - 32d AAMDC SECFOR
- EAC SHORAD Mission
- Force Protection - Non-contiguous Asymmetrical Threat
- Force Protection - Asymmetrical Threat
32nd AAMDC

Command, Control, and the roles of 32nd AAMDC

Defining the Command
### Roles of the AAMDC Commander

<table>
<thead>
<tr>
<th>Senior ADA Commander</th>
<th>Theater Army Air and Missile Defense Coordinator (TAAMDCOORD)</th>
<th>Deputy Area Air Defense Commander (DAADC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Single POC for Army AMD in Theater</td>
<td>• Synchronizes Air Defense Ops</td>
<td>• Integrates Air Defense in Theater</td>
</tr>
<tr>
<td>• Responsible for AMD Operational Planning</td>
<td>• Develops and Maintains TAMD IPB/Situation Template</td>
<td>• Integrates 2 Levels of Modernized Patriot Force</td>
</tr>
<tr>
<td>• Conducts Defense Design-Operational Level Planning</td>
<td>• Assists in Target Definition</td>
<td>• Chairs Repri-Board</td>
</tr>
<tr>
<td>• Recommends DAL</td>
<td>• ISR Recommendations</td>
<td>• Recommends CAL/DAL with CVT Methodology</td>
</tr>
<tr>
<td>• Develops AMD Annex for CFLCC</td>
<td>• Input to Target Nomination Process</td>
<td>• Assists with AADP development</td>
</tr>
<tr>
<td>• Commands all EAC Patriot</td>
<td>• Disseminates Early Warning</td>
<td>• Assists in Theater Early Warning</td>
</tr>
</tbody>
</table>

32d AAMDC does more than active defense!

• Provides LNOs to Higher and JTAMD C2 Nodes and Accepts LNOs from Lower Elements and Components

• Develops AMD Annex for CFLCC

• Provides LNOs to CRC/TAOC/AEGIS

• Integrates AMD Communication (Data/Voice)

• Issues SAM/SHORAD Tactical Order (SSTO)

• Integrates Coalition AD
Decisive Points

Maintain Operational Momentum
- Karbala Gap
- LSAs
- Kahabur Gate
- Camp Udari FARPS
- As Sayliyah
- Manama
- PSAB
- Doha

Achieve Strategic Patriot Stance - Geopolitical
- Jordan
- Qatar
- Turkey
- Bahrain
- Saudi

Unimpeded Generation of Combat Power
- KNB
- SPOD
- APOD
- Arifjan

ENDSTATE: Protect the Force and the DAL

BRANCHES
- Oil Fields
- Hasty Regime Collapse
- Regional Instability - Iran
- Korea Explodes

...a geographic place, specific key event, or enabling system that allows commanders to gain a marked advantage over an enemy and greatly influence the outcome of an attack...
"Let me begin by saying this will be a campaign unlike any other in history — a campaign characterized by shock, by surprise, by flexibility, by the employment of precise munitions on a scale never before seen and by the application of overwhelming force," Gen. Franks.

10 “Plays” that provided flexibility

**PLAY 2**

Description: C/2-1 (Arifjan) deploys to V Corps zone, OPCON 5-52, A/2-1 (KNB) conducts remote launch from Arifjan

Trigger: Maneuver forces clear PL Arifjan (Max range of SRBM to Arifjan)

Assumptions: No Al Hussein fired, ~+24hr from LD initiate

Task: C/2-1 deploys forward in V Corps Zone (OPCON 5-52), A/2-1 remote launch from KNB to protect Arifjan and SPOD

Purpose: Provide Config 3 coverage forward, mitigate risk to SPOD with remote launch

Operational Benefit: Provides one additional Config 3 forward

Risk: Single point of failure Arifjan/SPOD/KNB

Plays were briefed to COMCFLCC and the V Corps Commander, and were used by subordinate commanders for deliberate planning.
Flow of Forces

Achieving the TMD Stance
PATRIOT COMBAT POWER
OPERATION DESERT SPRING

DEFENDED ASSET LIST
Camp Doha, KU (KU FU)
Ash Shuaybah, KU (KU FU)
Kuwait City, KU (KU FU)
KClA, KU (KU FU)
Al Jaber, KU
Ali Al Salem, KU

Extend the SWA rotation (3-2 ADA)
Accelerate PAC 3 fielding to 5-52
PAC 3 capability to Kuwait early (TF 3-43)
Accelerate PATRIOT PREP

RIYADH AB, KSA
PSAB, KSA (RRB)
ESKAN VILLAGE, KSA (RRB)

COMBAT POWER
1 PATRIOT BATTALION
3 PATRIOT BATTERIES
2 REDUCED READINESS BTRY
4 COALITION BATTERIES
Patriot Combat Power
Serial 165/27 November 2002

Defended Asset List:
- Camp Doha, KU (KU FU)
- Ash Shuaybah, KU (KU FU)
- Kuwait City, KU (KU FU)
- KCIA, KU (KU FU)
- Al Jaber, KU
- Ali Al Salem, KU
- Arifjan, KU

Combat Power:
- 2 Patriot Battalions
- 4 Patriot Batteries
- 2 Reduced Readiness Btry
- 4 Coalition Batteries

Map showing locations in Kuwait and Saudi Arabia.
Deployment Priority: Tactical/operational stance

Deploy 2 sets of float equipment (Shortstop)

RIYADH AB, KSA
PSAB, KSA
ESKAN VILLAGE, KSA (RRB)

Kuwait

Saudi Arabia

Qatar

As Sayliyah, QAT
Al Udied, QAT

DEFENDED ASSET LIST
Camp Doha, KU (KU FU)
Ash Shuaybah, KU (KU FU)
Kuwait City, KU (KU FU)
KCLA, KU (KU FU)
Al Jaber, KU
Ali Al Salem, KU
Arifjan, KU

PATRIOT COMBAT POWER
SERIAL 167/ 17 January 2003

COMBAT POWER
1 PATRIOT BRIGADE
2 PATRIOT BATTALIONS
6 PATRIOT BATTERIES
1 REDUCED READINESS BTRY
5 COALITION BATTERIES
I
PATRIOT COMBAT POWER
SERIAL 174/ 12 February 2003

DEFENDED ASSET LIST
Camp Doha, KU (KU/US)
Ash Shuaybah, KU (KU/US)
Kuwait City, KU (KU FU)
KCIA, KU (KU FU)
Al Jaber, KU
Ali Al Salem, KU
Arifjan, KU
Kuwait Naval Base

Upgrade Alert State, 27 JAN 03
Play 9 (A/5-52 soldiers man Shortstop)

RIYADH AB, KSA
PSAB, KSA
ESKAN VILLAGE, KSA (RRB)

COMBAT POWER
3 PATRIOT BRIGADES
4 PATRIOT BATTALIONS
16 PATRIOT BATTERIES
1 REDUCED READINESS BTRY
1 SHORTSTOP
5 COALITION BATTERIES

As Sayliyah, QAT
Al Udied, QAT
DEFENDED ASSET LIST

- Camp Doha, KU (KU/US)
- Ash Shuaybah, KU (KU/US)
- Kuwait City, KU (KU FU)
- KCIA, KU (KU FU)
- Al Jaber, KU
- Ali Al Salem, KU
- Arifjan, KU
- Kuwait Naval Base

PATRIOT COMBAT POWER
SERIAL 179/ 13 February 2003

COMBAT POWER
- 3 PATRIOT BRIGADES
- 5 PATRIOT BATTALIONS
- 21 PATRIOT BATTERIES
- 1 SHORTSTOP
- 5 COALITION BATTERIES

EAC PATRIOT
MANEUVER PATRIOT
EUCHARIS/NATO ASSETS
COALITION ASSETS
SHORTSTOP

As Sayliyah, QAT
Al Udied, QAT
Divert ship to get equipment to Kuwait earlier

Flow soldiers early from late arriving batteries

DEFENDED ASSET LIST
Camp Doha, KU (KU/US)
Ash Shuaybah, KU (KU/US)
Kuwait City, KU (KU/FU)
KCIA, KU (KU/FU)
Al Jaber, KU
Ali Al Salem, KU
Arifjan, KU
Kuwait Naval Base

PATRIOT COMBAT POWER
SERIAL 177/ 7 March 2003

COMBAT POWER
4 PATRIOT BRIGADES
6 PATRIOT BATTALIONS
27 PATRIOT BATTERIES
1 SHORTSTOP
5 COALITION BATTERIES

EAC PATRIOT
MANEUVER PATRIOT
EUCOM/NATO ASSETS
COALITION ASSETS
SHORTSTOP

Israel

Jordan

King Faisal, JO
Amman, JO
Azraq, JO
Prince Hassan, JO

Ar Ar, KSA
PSAB, KSA
Tabuk, KSA

Riffa AB, BAH
Sheikh Isa, BAH
NAVCENT HQs, BAH
Al Manama, BAH

As Sayliyah, QAT
Al Udied, QAT
Doha City, QAT
Ras Laffen, QAT
Camp Snoopy, QAT

Saudi Arabia

Bahrain

Qatar

Kuwait

Defended Assets:
- Camp Doha, KU (KU/US)
- Ash Shuaybah, KU (KU/US)
- Kuwait City, KU (KU/FU)
- KCIA, KU (KU/FU)
- Al Jaber, KU
- Ali Al Salem, KU
- Arifjan, KU
- Kuwait Naval Base

Patrol Areas:
- Israel
- Jordan
- Saudi Arabia
- Bahrain
- Qatar
- Kuwait

Military Units:
- Divert ship to get equipment to Kuwait earlier
- Flow soldiers early from late arriving batteries

Resources:
- 4 Patriot Brigades
- 6 Patriot Battalions
- 27 Patriot Batteries
- 1 Shortstop
- 5 Coalition Batteries

Logistical Support:
- EAC Patriot
- Maneuver Patriot
- Eucom/Nato Assets
- Coalition Assets
- Shortstop

Geographical Locations:
- Doha City, QAT
- Al Udied, QAT
- Doha City, QAT
- Ras Laffen, QAT
- Camp Snoopy, QAT
- As Sayliyah, QAT
- Al Udied, QAT
- Doha City, QAT
- Ras Laffen, QAT
- Camp Snoopy, QAT
DEFENDED ASSET LIST

- Camp Doha, KU (KU/US)
- Ash Shuaybah, KU (KU/US)
- Kuwait City, KU (KU/FU)
- KCIA, KU (KU/FU)
- Al Jaber, KU
- Ali Al Salem, KU
- Arifjan, KU
- Kuwait Naval Base

**Patriot Combat Power**

**Force Module 2-4/28 March 03**

**Defended Asset List**

- Camp Doha, KU (KU/US)
- Ash Shuaybah, KU (KU/US)
- Kuwait City, KU (KU/FU)
- KCIA, KU (KU/FU)
- Al Jaber, KU
- Ali Al Salem, KU
- Arifjan, KU
- Kuwait Naval Base

**COMBAT POWER**

- 4 PATRIOT BRIGADES
- 7 PATRIOT BATTALIONS
- 34 PATRIOT BATTERIES
- 3 SHORTSTOP
- 8 COALITION BATTERIES

**Play 5 (D/3-43 deploys from QT to KU)**
DEFENDED ASSET LIST
Camp Doha, KU (KU/US)
Ash Shuaybah, KU (KU/US)
Kuwait City, KU (KU_FU)
KClA, KU (KU_FU)
Al Jaber, KU
Ali Al Salem, KU
Arifjan, KU
Kuwait Naval Base

TOTAL COMBAT POWER
4 PATRIOT BRIGADES
7 PATRIOT BATTALIONS
36 PATRIOT BATTERIES
2 SHORTSTOP
8 COALITION BATTERIES
Patriot Combat Power
Phase IV Transition

Defended Asset List
- Camp Doha, KU (KU/US)
- Ash Shuaybah, KU (KU/US)
- Kuwait City, KU (KU FU)
- Kcia, KU (KU FU)
- Al Jaber, KU
- Ali Al Salem, KU
- Arifjan, KU
- Kuwait Naval Base

Total Combat Power
- 4 Patriot Brigades
- 7 Patriot Battalions
- 40 Patriot Batteries
- 1 Shortstop-Not Missioned
- 8 Coalition Batteries
Pre-Hostility SSM Situational Template

224th BDE (NORTH)
- 1 x FROG-7 BN
- 2 X ASTROS BN
- 1 X ABABIL-100 BTRY (DS)
- 1 X ABABIL-50 BTRY (DS)

225th BDE (SOUTH)
- 1 x FROG-7 BN
- 1 X ASTROS BN
- 1 X ABABIL-100 BTRY

226th BDE (DS to RGFC)
- 3 x FROG-7 BN

227th BDE (CENTER)
- 1 X ASTROS BN
- 1 X M-2001 BN
- 1 X FROG-7 BN
- 1 X ABABIL-100 BTRY
- 1 X ABABIL-50 BTRY

228th BN (Tech Spt)
- 2 x U/I Al Samoud BN (National)

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>LAUNCHERS</th>
<th>MISSILES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al Hussein</td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>Al Samoud</td>
<td>11+</td>
<td>200</td>
</tr>
<tr>
<td>Ababil-100</td>
<td>15+</td>
<td>200</td>
</tr>
<tr>
<td>FROG-7</td>
<td>46</td>
<td>600</td>
</tr>
</tbody>
</table>
Post-Hostility SSM Situation

- Initial OB: 46
- Assessed Destroyed in Combat Ops: 15
- Destroyed in Place: 11
- Located but Not Secured: 7
- Secured or Destroyed in Place: 6
- Unaccounted For: 4

Legend: AL SAMOUD, ABABIL-100, FROG-7
Iraqi Cruise Missile Threat

**IRAQI CSSC-3 SEER SUCKER**

**MAX RANGE:** (57 NM) 105 KM

**CRUISING ALT.**
- MOD I: 330, 660, 1000 Feet
- MOD II: 100, 165, or 330 Feet

**WARHEAD:** 1,135 Pounds shaped-charge warhead; capable penetrating 40 to 60 inches of steel on impact

**ASSESSMENT:** 2-5 Launchers & 88 Missiles
Active Defense

The Iraqi Missile Fight
Summary of Launches against Kuwait

- **DTG: 202324Z Mar 03**
  - 1 x Ababil-100, Distance: 106 km
  - EW: CHAT
  - TARGETS: Camp UDARI
  - C5-52 engaged w/ 1 GEM & 1 PAC II
  - BDA: Missile destroyed

- **DTG: 232159Z Mar 03**
  - 1 X Al Samoud, DISTANCE: 160 km
  - EW: None
  - TARGETS: Camp UDARI
  - C/5-52 engaged w/ 1 x PAC II and 2 x GEM
  - BDA: Missile destroyed

- **DTG: 241042Z Mar 03**
  - 1 x Al Samoud, DISTANCE: 152 km
  - EW: AMDWS, PAWS, COBRA JUDY
  - TARGETS: Camps VA, UDAIRI, N. J.
  - C 5/52 engaged w/ 2 GEM+
  - BDA: Missile destroyed

- **DTG: 200924Z Mar 03**
  - 1 x Ababil 100, DISTANCE: 145 km
  - EW: CHAT, AMDWS, COBRA JUDY
  - TARGETS: Camps COMMANDO and DOHA
  - C/5-52 engaged w/ 1 x PAC II and 2 x GEM
  - BDA: Missile destroyed

- **DTG: 202100Z Mar 03**
  - 1 X Ababil-100, Not Engaged, Impact in Northern Arabian Gulf. Flew 187 Kilometers.

- **DTG: 202100Z Mar 03**
  - 1 X Ababil-100, Not Engaged, Impact in Northern Arabian Gulf. Flew 187 Kilometers.

- **DTG: 211001Z Mar 03**
  - 1 X Ababil-100, Not Engaged, Impact in Northern Arabian Gulf. Flew 187 Kilometers.

- **DTG: 212208Z Mar 03**
  - 1 X Ababil-100, Not Engaged, Impact in Northern Arabian Gulf. Flew 187 Kilometers.

- **DTG: 212208Z Mar 03**
  - 1 X Ababil-100, Not Engaged, Impact in Northern Arabian Gulf. Flew 187 Kilometers.

- **DTG: 212208Z Mar 03**
  - 1 X Ababil-100, Not Engaged, Impact in Northern Arabian Gulf. Flew 187 Kilometers.
CAMP DOHA, Kuwait (CNN) — The Iraqi military came within seconds of possibly wiping out the headquarters of the coalition ground forces with a missile on March 27, U.S. military officials said. The missile was intercepted and destroyed by a U.S. Patriot missile shortly before it could have hit its target.

The attack came as Lt. Gen. David McKiernan, coalition ground forces commander, was meeting with other top military officials.

“Stay calm, continue the BUA, and let PATRIOT take care of it.” COMCFLCC
Summary of CSSC-3 Launches

1. Camp Commando (BDA: None)
   - 1st CSSC-3 LAUNCH – 20 Mar

2. Missile Deflector (BDA: None)
   - 2nd & 3rd CSSC-3 LAUNCH – 28 Mar

3. Sharq Mall, Kuwait City (BDA: Minor Damage)
   - The “Future” Cruise
   - Missile threat is here today

4. Safwan (BDA: None)
   - 4th & 5th CSSC-3 LAUNCH – 31 Mar

5. Umm Qsar (BDA: None)
Summary of Launches in Iraq

13 DTG: 272056Z Mar 03
1 X SRBM (Ababil-100 or ER FROG)
EARLY WARNING: DSP-A, SBIRS
TARGETS: Possible Badr Corps Camp
ENGAGEMENT: None
BDA: Unknown

First coordinated multiple missile launch (Volley 17)

15 DTG: 010600Z Apr 03
1 X Al Samoud DISTANCE: 150 km
EARLY WARNING: COBRA JUDY; HIGGINS; TACDAR
TARGETS: LSA Bushmaster
C 2/1 engaged w/ 2 x PAC III
BDA: Missile Destroyed

16 DTG: 020020Z Apr 03
1 x FROG-7, 63 km, Not Engaged,
Targeted at LSA Bushmaster, IP Out, No BDA
EARLY WARNING: NONE

17 DTG: 020150Z Apr 03
2 x FROG-7, 95 km & 75 km, Not Engaged, Targeted at LSA Bushmaster, No BDA
EARLY WARNING: GCCS, AMDWS
KEY TRENDS: First coordinated multiple missile launch.
## What TAMD Forces Protected

<table>
<thead>
<tr>
<th>VOLLEY</th>
<th>DTG</th>
<th>LOCATION</th>
<th>WHAT WAS THERE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>200924ZMAR03</td>
<td>TAA Thunder</td>
<td>101st AAD Aviation Assets - 100+ Helos / 4,000 Soldiers</td>
</tr>
<tr>
<td>2</td>
<td>201030ZMAR03</td>
<td>Camp Commando Al Jahra</td>
<td>I MEF / Marine Engineer Group HQ - 4,700 Marines 100,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Civilians</td>
</tr>
<tr>
<td>5</td>
<td>202324ZMAR03</td>
<td>Camp Udairi</td>
<td>11th AHR and Combat Support Hospital - 4,000 Soldiers</td>
</tr>
<tr>
<td>6</td>
<td>211001ZMAR03</td>
<td>TAA FOX Al Jahra</td>
<td>1st Forward Service Support Group - 4,500 Marines 100,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Civilians</td>
</tr>
<tr>
<td>7</td>
<td>232159ZMAR03</td>
<td>Camps NJ / NY / PA</td>
<td>101st AAD - 12,000 Soldiers</td>
</tr>
<tr>
<td>8</td>
<td>241042ZMAR03</td>
<td>Camps VA / NJ</td>
<td>V CORPS Main / 101st AAD - 8,000 Soldiers</td>
</tr>
<tr>
<td>10</td>
<td>251246ZMAR03</td>
<td>Camp Commando</td>
<td>I MEF / Marine Engineer Group HQ - 4,700 Marines</td>
</tr>
<tr>
<td>12</td>
<td>270831ZMAR03</td>
<td>Camp Doha</td>
<td>Camp Doha / CFLCC HQ - 8,000</td>
</tr>
<tr>
<td>15</td>
<td>010600ZAPR03</td>
<td>LSA Bushmaster</td>
<td>11 AHR, 101st AAD Aviation Assets, V CORPS Log Assets</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10,000 Soldiers</td>
</tr>
</tbody>
</table>
The Digital Battlefield

Early Warning & Situational Understanding
Estimated Launch to Impact Timeline

1 Minute
- ~ 20 Sec to detect
- 1st indication of launch at CFLCC HQ. Initiate the PA Sys & Conference Bridge Alert “SCUD” alert

2 Minutes
- ~ 70 Sec for TES to Profile & broadcast TDDS/TIBS
- Impact ellipse appears

3 Minutes
- ~ 20 Sec for ellipse
- Areas at risk announced PAWS, Conference Bridge & CFLCC Cmd Net (SATCOM)

4 Minutes
- ~ 40 Sec to assess & warn PAWS & Conf Bridge

5 Minutes
- ~ 30 Sec for pager alert
- Time for MSCs & Base Clusters to go through Battle Drills

~ 6-7 min
- Impact

Actual total warning 30 - 45 Seconds Launch to Impact

AL HUSSEIN Launch

AL SAMOUD / ABABIL-100 Launch

~ 40 Sec to clear horizon & to JDN

1st indication of launch at CFLCC HQ. Initiate the PA Sys & Conference Bridge Alert “SCUD” alert

~ 20 to get best track

~ 40 Sec to assess & warn (PAWS & Conf Bridge)

1 Minute

~ 30 Sec for pager alert

~ 3-4 min

Time for MSCs & Base Clusters to go through Battle Drills

~ 1:00 min or ~ 2:00 min (warning time once EW gets to the MSC/Base)

= Time saved by announcing “Kuwait” at risk - not waiting for estimated impact ellipse
32nd AAMDC

Engagement Operations

First ever successful Counter-TBM Operation
OIF Counter-TBM Fight

- 32nd fully integrated with CFACC as part of the Counter-TBM Team (C-TBM)
- C-TBM team’s analysis and collection resulted in 30 of the 61 TSTs against TBM equipment / Others were located by national agencies or targets of opportunity
- Combined Theater C-TBM attack operations credited with destroying 76% of assessed launchers
- C-TBM team designated as the OIF authority for all TBM collection, targeting, and BDA
- Disrupted the Iraqi TBM campaign plan by destroying 3 launchers prior to initiation of combat

“We are positioned in Western Iraq with aircraft, reconnaissance, surveillance and ground platforms and people on the ground to ensure we can contain any missile strikes attempted by Iraq against neighboring countries,” Joint Chiefs of Staff Chairman General Richard Myers
32nd AAMDC

CAMP DOHA

AIR DEFENSE

Operation DIRTY SKIES
CENTCOM Message 292057Z Nov 02

In light of recent terrorist attacks, commanders are directed to maintain a vigilant posture to respond to terrorist threats. This message provides commanders with specific direction and guidance concerning self defense which remain in effect throughout the CENTCOM AOR, and additional actions to be taken to enhance air defense measures...

...I expect all units to lean forward and set a vigilant posture. All units will maintain a high profile posture that clearly indicates readiness, willingness, and ability to respond decisively to any indication of hostile intent or interference with our operations...

Terrorist attacks using aircraft, including ultralites and paragliders, are possible
Camp Doha Stinger Defense

• **Mission:** CFLCC establishes Short Range Air Defense (SHORAD) for Camp Doha in order to defeat air breathing threats.

• **Intent:** Conduct air defense operations to safeguard a critical CENTCOM C2 node, personnel, and combat power against asymmetric / terrorist threats and to integrate SHORAD into existing host nation and CFACC defensive counter-air (DCA) operations.

• **Key tasks:**
  - Establish clear C2 for Stinger engagement
  - Establish passive defense measures for Camp Doha
  - All soldiers and leaders clearly understand ROE
  - Airspace De-confliction
  - Conduct rehearsals

• **Avenger Platoon:** 1-3 ADA (JAN-FEB), 2-44 ADA (MAR)
  - Formed two Stinger Teams
  - “Demonstrated” using Avengers & FOX Section

• **Established ROZ over Camp Doha**

• **Based on experience from Clear Skies**

The Avenger “demonstrations” proved to be a very effective deterrent
1-3 ADA

- Organic to the 3d Infantry Division (MECH), Fort Stewart, Ga.
- 513 Soldiers assigned, 513 soldiers came home!
- Assigned Missions during Operation Iraqi Freedom:
  - Short Range Air Defense and Early Warning
  - Division Rear Area/LOC Security, Screened 3ID SW Flank during assault into Baghdad
  - Emplaced and Secured forward deployed PATRIOT batteries
  - Secured the Baghdad International Airport
  - Conducted Civil Military Operations in Abu Ghurayb (held first local democratic elections in post war Iraq, established local government and public services, conducted Combined raids and destroyed terrorist cells with Abu Ghurayb Police)

**Combat Medals earned by the soldiers of 1-3 ADA:**
- 2 x Silver Star Medals
- 4 x Bronze Star Medals (Valor)
- 45 x Bronze Star Medals
- 28 x Army Commendation Medals (Valor)
- 1 x Purple Heart Medal, 2 pending

**Enemy BDA:**
- Destroyed 5 x T-72 Tanks
- Destroyed 80 (+) Technical Vehicles
- Destroyed 400 (+) Dismounted Infantry
- Dozens of AAA pieces
- Captured 10 POWs
- Captured 14th BDE, Medina Div HQ
- Captured 300 (+) armored vehicles
2-44 ADA
Air Assault!

• Organic to the 101st Airborne Division (Air Assault), Fort Campbell, KY
• 480 Assigned and currently operating in Iraq
• Assigned missions during Operation Iraqi Freedom:
  – Short-range Air Defense and Early Warning
  – A BTRY conducted ground combat operations with 1 BCT in An Najaf, Iraq
  – C BTRY conducted air defense of DIV FARPs and ground combat operations with 3 BCT in Al Hillah, Iskandria, Baghdad, and Tal Afar Air Field.
  – D BTRY conducted air defense of DIV AAs, LOC security (HWY 1 & 8, 300km), Forward Passage of Lines between 4th ID and 101st ABN DIV, cache collection, ASP security and new Iraqi army training in Mosul, Iraq.
  – HHB conducted DREAR security, BN FM retrans, LOC security (HWY 1 & 8), EOD operations and new Iraqi army training in Mosul, Iraq.
• BN Currently conducting Civil Affairs operations in Dahuk, Iraq and Irbil, Iraq.
• Anticipated redeployment in February 2004
1-44 ADA

• Organic to the 4th Infantry Division (MECH), Ft. Hood, Texas & Ft. Carson, Colorado

• Assigned Missions during Operation Iraqi Freedom

  - Battalion HQ’s provided Command and Control for TAA Ironhorse just South of Baghdad in Iskendariyah.

  - Secured Taji Airfield in North Baghdad after 1BCT attack and Linebacker platoon helped defeat enemy counterattack.

  - Secured Al Sahra airfield and provided lone heavy combat power in North Tikrit

  - Secured Saddam Hussein’s Presidential Palace in downtown Tikrit to allow establishment of the 4th ID Headquarters.
- C/1-44 ADA completed the longest continuous mechanized movement of the entire war by moving all 10 Linebackers 700 miles from Kuwait through Baghdad and to Tikrit with no break downs in combat power.

- Avengers screened Iranian border in effort to deter militants from crossing into Iraq.

- Participated in the disarmament of the MEK militia in Eastern Iraq.

- Conducted numerous raids and ambushes in support of division operations to destroy remnant Ba’ath Party sympathizers.

- Participated in humanitarian operations in Iskendariyah and Tikrit.

- Continues today to conduct operations in support of Operation Iraqi Freedom in Northern Iraq.
Elements of 1-44 ADA secured the Presidential Palace in Tikrit to allow the Division HQ’s to be established at the palace. The air defense elements guarding the palace have successfully defended palace multiple times from small arms, RPG, and mortar attacks from noncompliant forces.
Operation Iraqi Freedom
Lessons & Observations
Final Thoughts

Proven....

• You will fight as you train

• Patriot is lethal

• Non-contiguous battlefield exposes us all

• There is no difference between SHORAD AND HIMAD.. but the equipment. The fundamental tasks to guarantee freedom of maneuver are the same

• There is no difference between EAC and Corps Patriot; all must be trained under one standard

• Basic fundamentals carry the fight; again
LESSONS/OBSERVATIONS (-)

Joint Deficiencies

- C4I Lacking – Internal and external voice & data capability — Controlling Authority to shooter links
  - Voice over TADIL-J / Link 16
  - Voice to airborne controller
  - Theater Air Defense net

- Impacts of dense joint / coalition battlespace ➔ EMI ➔ Spurious tracks, IFF
  - Training, Doctrine, Material Solutions

- Space based warning not effective for SRBMs
LESSONS/OBSERVATIONS (-)

Systems Deficiencies

- SRBMs more challenging – non-contiguous battlefield requires 360° coverage
- Interoperability via Link 16 to Battery Level

Operational Deficiencies

- Need revised Tactical SOP for Patriot Crews w/ focus on engagement operations
- EAD / EAC unit training to include CSS training
  - Operations on non-contiguous battlefield
  - Resourcing of CSS units
- PATRIOT organization
  - 4 Btry vs. 5 Btry battalion
  - PAC II in PAC III Task Force

☑ Completed Action
The “Way Ahead”

- OIF validated the inherently “Joint Nature” of Theater Missile Operations

- Joint Exercise/ Experiments enhance combat readiness (RS, UFL, IL, CJTFEX (JCIET))

- “CTC Like” training opportunity required for AMD forces

- C2 limitations pose greatest risk now and in the future

- Enhance capabilities to counter the evolving threat

- Theater-level air defense command required
  - Today- 32d AAMDC with Joint Responsibilities
  - Tomorrow- Standing Integrated Missile Defense JTF
ONGOING CULTURAL CHANGE

- Joint/Coalition
- Technical
- TSOP Oriented
- SWA Rotation Focus
- Missile Defender First; Then Soldier
- Lethal; Best in the World

HIMAD

AMD

SHORAD

Lessons/Observations (-)

WARRIOR ETHOS

Joint/Coalition/Combined Arms

Technical & Tactical Competence

Soldiers First; Professional AMD Force

- Combined Arms
- Tactical
- MDMP/Troop Leading Oriented
- CTC Focus
- Soldier First; Then Air Defender
- Overmatched by Current Threat
AMD LESSONS LEARNED (+)

Joint Operations
• Joint (AEGIS) early warning and situational awareness w/ Link 16
• Role as DAADC w/ CFACC – Counter-TBM team (Attack Operations), AADP
• Role as TAAMMDCOORD w/ CFLCC-Operations w/ V Corps, I MEF
• Operational Force Protection

Combined Operations
• Integration of US & Coalition TMD operations: Jordan, Qatar, Bahrain, Turkey, Saudi Arabia, Kuwait, Israel, Dutch, UK
• C2 of Kuwait PATRIOT (46 ADA (KWT) TACON to 11 BDE in Feb 03)
• Host nation early warning

Performance
• PATRIOT lethality proven – 9 of 9- confirmed warhead kills 8 of 9
• OR Rate for the Patriot force >92% during combat operations
• Stance and flexibility – Playbook, Shortstop, EAC remissioning, Asymmetric defense
• Divisional ADA – Combined arms contribution, fight as a battalion, security missions, CMO
ACHIEVING THE AMD “STANCE”

**TACTICAL**
- PATRIOT IS A SECTORED WEAPON; DOES NOT PROVIDE 360 DEGREE COVERAGE
- NON-CONTIGUOUS BATTLEFIELD INCREASED REQUIRED FIRE UNITS; MULTIPLE PTLs
- HEAVY TRUCKS STUCK ROUTINELY
- COMBINED ARMS INTEGRATION
  (+)DIVISIONAL (-)PATRIOT
- ASYMMETRICAL THREAT – STINGER OVERMATCHED
**RESULT:** EXPOSURE OF HIGH VALUE ASSETS TO TBMs AND CRUISE MISSILES

**OPERATIONAL**
- 173RD AIRBORNE REGIMENT MOVED BY AIR TO BASHURE AIRFIELD, NORTH EAST IRAQ; A C-130 ONLY AIRFIELD
- IRAQ LAUNCHED TWO FROGS TOWARD THEIR LOCATION
- CENTCOM REQUESTED PATRIOT SUPPORT
- DUE TO NON-CONTINGUOUS BATTLEFIED, PATRIOT COULD NOT MOVE OVER LAND TO DEFEND 173RD
**RESULT:** UNDEFENDED AND EXPOSED FORCES

**STRATEGIC**
- 17 C5s AND 21 C17s TO MOVE 5 PATRIOT MINIMUM ENGAGEMENT PACKAGES TO JORDAN
- PATRIOT LAUNCHERS DO NOT FIT ON LOWER DECKS OF ALL SHIPS; MOSTLY WEATHER-DECKS
**RESULT:** LIMITED AIR FRAMES DEVOTED TO MOVE PATRIOT

Pursue AMD-Vision

**OIF VALIDATED THE REQUIREMENT FOR MEADS**
## SITUATIONAL AWARENESS/UNDERSTANDING

### VOICE
- PATRIOT IN IRAQ COULD NOT TALK TO TAOC IN KUWAIT
- NO SATCOM
- AWACS CAN’T TALK TO GROUND BASED UNITS

**RESULT:** NO VOICE LINK BETWEEN BATTALION HQS AND HIGHER AUTHORITY (ID AND ENGAGEMENT)

**FIX:** MTOE AND JOINT

**ACTION:** ADAS / 32ND AAMDC

### DATA
- SHORTAGE OF HSDIO CARDS RESULTED IN PAC-2 UNITS NOT TRANSMITTING/RECEIVING DATA FROM ICC/TAOC/CRC
- PAC-2 AND PAC-3 INCOMPATIBILITY

**RESULT:** AUTONOMOUS UNITS

**FIX:** HSDIO CARDS FOR PAC-2 UNITS PATRIOT & MEADS TRANSITION

**ACTION:** LTPO AND 32ND AAMDC

### JDN
- AWACS/CRC DID NOT ALLOW GROUND AND SEA BASED DATA TO BE DISPLAYED

**RESULT:** DIFFERENT AIR PICTURE AT DIFFERENT LEVELS OF COMMAND

**1ST TIME PATRIOT WAS AWARE OF INCOMING TBM WAS WHEN IT’S RADAR SAW IT**

**FIX:** MAXIMIZES JOINT EFFORTS IN DEFINING THE JDN

**ACTION:** DCD

### ACO/SPINS
- OIF SPINS WERE NOT TIMELY
- UNITS NOT AGGRESSIVE IN RECEIVING ACO/SPINS
- ACMS NOT USED TO ROUTE FRIENDLY AC

**RESULT:** UNITS OPERATING OFF DIFFERENT DATA

**FIX:** JOINT TRAINING

**ACTION:** ADAS/32ND AAMDC/DIV ADA

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**CHALLENGED AIRSPACE CONTROL**
**RADAR RELIABILITY**

**TWT**
- MAX LIFE IS 10,000 HRS.
- NO TIMER ON TWT
RESULT: SOLDIER DOESN’T KNOW HOW MANY HOURS ON HIS TWT
RECOMMENDATION:
1) ESTABLISH PROCEDURES TO TRACK TWT USE
2) ESTABLISH TWT WARM-UP CRITERIA
ACTION: LTPO

**COMPRESSOR/DEHYDRATION UNIT**
- CURRENTLY REQUIRES SOLDIER W/ STOPWATCH TO TIME ON AND OFF CYCLES FOR AN HOUR TO DETERMINE FMC/NMC
RESULT: PROCEDURE NOT PRACTICAL IN WAR
RECOMMENDATION: EITHER CHANGE WAVE GUIDE PRESSURIZATION SYSTEM OR ADD THIS CHECK INTO BIT (TELLS OPERATER IF CDU IS OVERHEATING)
ACTION: LTPO

**CABLES ON THE FRONT-END**
- 3 CABLES; NO DIAGNOSTICS
- IF SOLDIER REPLACES ONE CABLE THAT APPEARS TO BE DEFECTIVE – A PROBLEM IS INTRODUCED THAT IS NOT DETECTABLE WITH DIAGNOSTICS
RECOMMENDATION: ESTABLISH LIFE EXPECTANCY ON CABLES, REPLACE ALL 3
ACTION: LTPO

**HIGH FAILURE RATES**
- RF WINDOWS
- WAVE GUIDE
- EDRS

**OFF-SHIP/AIRCRAFT READINESS**
## TRAINING

### AMD STANDARD BEARER
- Soldiers 100% reliant on Patriot weapon system
- No standard for training proficiency
- Recognition of technical/tactical competence

**Result:** Across the force there are varying degrees of standards

**Fix:**
1. Initiate Master Gunner course (1<sup>st</sup> class 2<sup>nd</sup> QTR FY04)
2. Develop/publish Patriot Gunnery manual
3. Develop AMD TOP gun program
4. Train new post-OIF TSOP

**Action:** ADAS / 32<sup>nd</sup> AAMDC

### Operator Training in an Ambiguous Environment
- On-line training mode/troop proficiency
- Trainer does not present operator with misclassified or false tracks

**Fix:**
- Update OTM/TPT/PCOFT software

**Action:** LTPO / 32<sup>nd</sup> AAMDC

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**Professionalize the Force**
TRAINING

FRIENDLY PROTECT

- Operators focus solely on TBM's; did not work ID of unknown aircraft on scope
- Lost situational awareness of air tracks
- Autonomous operations procedures not clear.

**RESULT:** Loss of situational awareness

**FIX:** Train scope awareness – all air platforms.

**ACTION:** ADAS/32nd AAMDC

PATRIOT GENERAL KNOWLEDGE

- Operators at all levels didn’t fully understand tabular entry values.
- Procedures not established for harmonizing the Patriot weapon IAW METT-TC.

**RESULT:** Operator not enabling the weapon system.

**FIX:**
- Re-write TSOP; include linkage between IPB (doctrinal/situational template) to tabular entries.
- Grow experts in the force.

**ACTION:** ADAS/32nd AAMDC

PROFESSIONALIZE THE FORCE
# BASIC FUNDAMENTALS

## SHOOT
- MUST SHOOT INDIVIDUAL AND CREW-SERVED WEAPONS TWICE A YEAR
- CONVOY LFX A MUST
- RING MOUNT READINGS
- IMMEDIATE ACTION DRILLS – SPORTS
- WEAPONS MAINTENANCE
- MUZZLE AWARENESS

## MOVE
- CONVOY PROCEDURES
- MANEUVER / COMBINED ARMS
- VEHICLE RECOVERY OPERATIONS
- MTOE REVIEW – PLUGGERS; NVGs
- UP-ARMORED HMMWVs
- FUTURE REQUIREMENTS

## COMMUNICATE
- RADIO MAINTENANCE
- FIELD EXPEDIENT ANTENNAS
- URIDIUM PHONES/SATCOM - MTOE
- MEDEVAC/CALL FOR FIRE
- USAF “FIREWALLS” PROHIBITS AMDWS, C2PC, CHAT
- AIRBORNE PLATFORMS; CAN’T TALK TO PATRIOT

### FIX – “CTC-LIKE EXPERIENCE”
- COMBINED ARMS/JOINT
- COE/NON-CONTIGUOUS
- TRAINED/COMPETENT OCS AND OPFOR; TBMs, CMs UAVs, ASYMMETRIC THREATS
- LESSONS LEARNED; COMMUNITIES OF PRACTICE
- LEADER DEVELOPMENT – LEADER TRAINING PROGRAM
- UPDATE MTPs AND JOINT DOCTRINE
- LFX – DUST FACILITY/ CONVOY LFX

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**WARRIOR FOCUS**
TSOP RE-WRITE; PATRIOT GUNNERY MANUAL

FORMING LEADER DEVELOPMENT BRANCH IN ADAS; CREATIVE ADAPTIVE, INNOVATIVE LEADERS

JTAM COURSE, PATRIOT MASTER GUNNER, TOP GUN, CTC LIKE EXPERIENCE

CLASSIFICATION/TRAINING SOFTWARE IMPROVEMENTS, FALSE TBM ELIMINATION, OPERATOR DECISION AIDS, HUMAN/COMPUTER INTERFACE, HIGH FAILURE PARTS

ADAS POI CHANGES, TOP GUN, CTC, ONE BRANCH - AMD

ADAFCO-NG CONTRIBUTION, WARRANT OFFICERS (MORE EXPERIENCE) IN THE ECS

SPURRIous TRACKS INJECTED IN PCOFT SOFTWARE; USE OF DUST FACILITY