THE AIR FORCE AND THE GULF WAR
About the Air Force Association

The Air Force Association, founded in 1946, exists to promote Air Force airpower.

We educate the public about the critical role of aerospace power in the defense of our nation, advocate aerospace power and a strong national defense, and support the United States Air Force, the Air Force family, and aerospace education.

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Cover Image: USAF F-15C, F-15E, and F-16 fighters fly over burning oil fields. (USAF photo)

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The Air Force and the Gulf War

Table of Contents

3
A Strategy That Surprised

4
Principals and Players

6
Principal US Aircraft in the Gulf

12
Chronology of the Conflict
Closeups: Instant Thunder • The Departure of Dugan • The Second Front • The Scud Hunt • The Weinberger Doctrine • Medals and Decorations • Desertspeak

27
Desert Shield
Crisis in the Gulf • Desert Shield • The Air Boss • The Air Bridge • The Coalition

32
Judgments, Opinions, and Exhortations

34
Desert Storm
Airpower Opens the Fight • The Longest Mission • Precision Attack • Air Supremacy • Eyes and Ears of the Storm • Extraordinary Support • Khafji • Total Storm • The Attrition of Iraq • The Last 100 Hours

44
Nitwitness News

45
Stats from the Storm

49
For Further Reading
A STRATEGY THAT SURPRISED

Conventional military wisdom pointed to a ground war with airpower in a secondary role.

In July 1943 Army Field Manual 100-2 acknowledged that “land power and airpower are co-equal and interdependent forces; neither is an auxiliary of the other.” However, most of the Army never believed it, even after the Air Force became a separate military service. The Air Force gained ascendency during the Cold War because of the strategic nuclear mission, but tactical airpower remained in the shadow of the Army. In the 1980s, Tactical Air Command—which spoke for the tactical air forces—concurred in the Army’s AirLand Battle Doctrine, which regarded airpower’s job as supporting the Army.

When the Gulf War loomed in 1990, therefore, the expectation was that the land forces would take the lead and play the main role with airpower as a secondary element. It was assumed that the war would play out in the traditional sequential order, rolling back enemy defenses before attacking the deep targets. It was not obvious ahead of time that the Gulf War would be a rout. High casualties were anticipated. The Center for Strategic and International Studies forecast 15,000 US casualties, and the US commander, Army Gen. Norman Schwarzkopf, estimated 5,000.

It didn’t happen that way. Early on, Schwarzkopf realized that he had no ground options available and would not have any for many months. In a decision that would prove pivotal, he asked the Air Force to plan a strategic air campaign with hopes that it would inflict attrition of as much as 50 percent on the Iraqi force. As late as December, Army Gen. Colin Powell, Chairman of the Joint Chiefs of Staff, warned Congress against being misled by “experts, amateurs, and others” who promised an easy victory with airpower.

When the Desert Storm shooting war opened on Jan. 17, 1991, the conventional expectations and concepts were blown away. The ground forces did not engage until a 38-day air campaign had whittled the Iraqis down to size and left them reeling. The early plans had been for a sequential air campaign in graduated phases. The actuality was parallel operations, in which all of the target sets were struck the first night. Everything went down at once. The Iraqis had no opportunity to adjust, recover, or react.

Iraq had hoped for a battle of attrition on the ground in which the Coalition’s advantages—airpower and technology—would be nullified or minimized. Instead, Coalition airpower just kept coming. On Feb. 24, Coalition ground troops, supported by airpower, surged into Kuwait and in four days drove out the staggering Iraqis in “The Mother of All Retreats.”

The Army wanted to call it the “four-day war” and would later insist that the ground action had been decisive, but it was fairly obvious that the air campaign had been the larger part of the effort. The Gulf War experience was confirmed in other regional conflicts and contingencies of the 1990s.

For a brief time, it appeared that the manifest change in warfare would take root in doctrine. Joint Vision 2010, published in 1996, stated: “Instead of relying on massed forces and sequential operations, we will achieve massed effects in other ways.” That was too much for the old guard of the Army to swallow. The offending language was stripped out of the next edition of Joint Vision, followed by a renewed advocacy of “Boots on the Ground.” It has again become popular to debunk the achievements of airpower in the Gulf, and a great many people who weren’t around then—or who have forgotten—are ready to believe the debunkers.

As the 20th anniversary of the conflict approaches, the Air Force Association presents “The Air Force and the Gulf War” in honor of those who took part in it and for the information and benefit of those who want to understand what really happened in Desert Shield and Desert Storm.
President
George H. W. Bush

Secretary of Defense
Dick Cheney

Gen. Colin Powell,
Chairman of the Joint Chiefs of Staff

Gen. H. Norman Schwarzkopf,
Commander in Chief,
US Central Command

Col. John Warden,
head of Checkmate planning group, Air Staff

Lt. Gen. John J. Yeosock,
US Army component commander

Vice Adm. Henry H. Mauz Jr.,
US Navy component commander to December 1990

Lt. Gen. Walter E. Boomer,
US Marine Corps component commander

Vice Adm. Stanley Arthur,
US Navy component commander from December 1990
Principals & Players

Lt. Gen. Charles A. Horner,
Joint Force Air Component Commander

Brig. Gen. Buster C. Glosson,
Director of Campaign Plans,
Central Air Forces,
Lt. Col. David A. Deptula,
Director of Strategic Planning,
CENTAF

Gen. H. T. Johnson, Commander,
US Transportation Command
and Military Airlift Command

Lt. Gen. Charles A. Horner,
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Brig. Gen. Buster C. Glosson,
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Central Air Forces,
Lt. Col. David A. Deptula,
Director of Strategic Planning,
CENTAF

Gen. H. T. Johnson, Commander,
US Transportation Command
and Military Airlift Command

Gen. Robert D. Russ,
Commander, Tactical Air Command

King Fahd bin Abdul Aziz of Saudi Arabia

Prince/Lt. Gen. Khalid bin Sultan,
Commander of Arab forces

Prince Bandar bin Sultan,
Saudi Arabian Ambassador to US

Saddam Hussein, President of Iraq
PRINCIPAL US AIRCRAFT IN THE GULF

A-6E INTRUDER. Navy medium-attack fighter. In service for almost 30 years. (DOD photo/TSgt. Rose Reynolds)

A-10 THUNDERBOLT II. USAF attack aircraft, specializing in antiarmor and close air support missions. Used Maverick missile with great effect against tanks. (USAF photo)

AC-130 SPECTRE. USAF special operations gunship. (USAF photo)

AH-1 COBRA. Marine Corps attack helicopter. (DOD photo)
AH-64 APACHE. Army’s primary attack helicopter. (DOD photo/Sgt. Brian Cumper)

AV-8B HARRIER. Marine Corps jump jet. (DOD photo)

B-52 STRATOFORTRESS. USAF heavy bomber, operational since the 1950s. It was the weapon the Iraqi Army feared most. (USAF photo/TSGT. Donald McMichael)

C-130 HERCULES. USAF rugged turboprop in-theater airlifter. (USAF photo/TSGT. H. H. Deffner)

C-141 STARLIFTER. USAF long-range airlifter, carried oversize but not outsize cargo. Flew more than half of the strategic airlift missions. (USAF photo/Sgt. J. M. Crowther)

C-5A/B GALAXY. USAF’s largest airlifter to date, able to carry tanks and other outsize cargo. (USAF photo)
E-2C HAWKEYE. Navy airborne early warning aircraft. (Navy photo/Cmdr. John Leenhouts)

E-3 AIRBORNE WARNING AND CONTROL SYSTEM (AWACS). Radar in rotating dome looks deep into enemy airspace, allows USAF to manage the air battle. Enabled fighters to attack from beyond visual range. (USAF photo)

EA-6B PROWLER. Navy electronic warfare and tactical jamming aircraft. (Navy photo/Lt. Cmdr. Dave Adams)

EC-130E COMMANDO SOLO. USAF airborne command and control and psychological operations aircraft. (USAF photo/TSgt. John McDowell)

E-8 JOINT STARS. USAF aircraft with Air Force-Army mission crew employing deep-look radar and moving target indicator to track everything that moved on the ground. Not yet operational, but flew missions every night. (USAF photo)

EC-130H COMPASS CALL. USAF communications jammer. (USAF photo/TSgt. Fernando Serna)
F-4G WILD WEASEL. Hunts and destroys enemy radars and antiaircraft defenses. Intimidated by fear of USAF F-4G and HARM missiles, operators often declined to activate radar. (USAF photo/MSgt. Bill Thompson)

F-14 TOMCAT. Navy’s premier fleet defense interceptor. (USAF photo/SrA. Chris Putnam)

F-15 EAGLE. USAF’s top air superiority fighter. Accounted for 31 USAF aerial victories in the Gulf. (USAF photo/TSGt. Fernando Serna)

F-15E STRIKE EAGLE. USAF’s variant equipped for deep interdiction at night and in bad weather. (USAF photo/TSGt. Rose Reynolds)

F-16 FIGHTING FALCON. Multirole USAF fighter, used mostly for ground attack. Flew more sorties in Desert Storm than any other kind of fighter. (USAF photo/SrA. Chris Putnam)

F-111 AARDVARK. Low-flying, swing-wing USAF deep interdiction fighter. EF-111 Raven variant was an electronic jammer. (USAF photo/TSGt. Rose Reynolds)
<table>
<thead>
<tr>
<th>Aircraft</th>
<th>Description</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-117 NIGHTHAWK</td>
<td>USAF Stealth fighter, operational since 1985, but existence not revealed until 1988. Flew two percent of total attack sorties but struck 40 percent of the strategic targets. <em>(USAF photo)</em></td>
<td><img src="image1" alt="F-117 NIGHTHAWK" /></td>
</tr>
<tr>
<td>HH-3E JOLLY GREEN GIANT</td>
<td>USAF rescue helicopter. <em>(USAF photo/SSgt. Steve McGill)</em></td>
<td><img src="image2" alt="HH-3E JOLLY GREEN GIANT" /></td>
</tr>
<tr>
<td>F/A-18 HORNET</td>
<td>Multirole Navy and Marine Corps strike fighter. <em>(Navy photo)</em></td>
<td><img src="image3" alt="F/A-18 HORNET" /></td>
</tr>
<tr>
<td>KC-10 EXTENDER</td>
<td>Dual role USAF cargo/tanker aircraft. <em>(USAF photo)</em></td>
<td><img src="image4" alt="KC-10 EXTENDER" /></td>
</tr>
<tr>
<td>HC-130</td>
<td>USAF combat search and rescue refueling aircraft. <em>(USAF photo/SSgt. Steve McGill)</em></td>
<td><img src="image5" alt="HC-130" /></td>
</tr>
<tr>
<td>KC-135 STRATOTANKER</td>
<td>USAF’s primary aerial refueling aircraft. <em>(USAF photo)</em></td>
<td><img src="image6" alt="KC-135 STRATOTANKER" /></td>
</tr>
</tbody>
</table>
MC-130 COMBAT SHADOW. USAF special operations tanker. (USAF photo)

MH-53J PAVE LOW. USAF special operations helicopter. (USAF photo)

HH-60G PAVE HAWK. USAF rescue helicopter. (USAF photo/TSgt. David W. Richards)

RC-135 RIVET JOINT. USAF electronic surveillance aircraft. “Ears of the Storm” located, identified, catalogued, and monitored enemy signal emitters. (USAF photo)

RF-4. Unarmed USAF multisensor reconnaissance aircraft. (USAF photo)

TR-1/U-2. USAF high-altitude surveillance aircraft. Structurally identical but with some internal variations, mostly in electronics. (USAF photo/Sgt. Cheri Ries)
July 17, 1990 In televised speech, Saddam Hussein warns he will attack Kuwait if his demands are not met regarding (1) old border dispute, (2) decrease in Kuwaiti oil production, (3) reduction in Kuwait’s share of oil from Rumaila oil field, which extends under Iraqi territory.

July 18 Kuwait places forces on alert. US Ambassador to Iraq April C. Glaspie tells Iraqi Foreign Ministry that US insists all disputes in Mideast be settled peacefully.


July 20 Iraqi newspapers report deployments of Iraqi troops to border with Kuwait. CIA reports 30,000 Iraqi troops deployed.


July 21 US installs mobile tactical air control center at Abu Dhabi, capital of United Arab Emirates.

July 24 US, UAE announce joint exercise.

July 25 Ambassador Glaspie summoned to meet with Saddam. Saddam says he is dismayed at US support for Kuwait. As separate matter, he states he will not resolve dispute with Kuwait by force. Bush Administration offi-
Officials announce willingness to use military force to defend the flow of oil through Strait of Hormuz.

July 26 Kuwait agrees to cut oil production to levels demanded by Iraq.

July 30 CIA reports 100,000 Iraqi troops, 300 tanks massed on Kuwait border. Iraqi, Kuwaiti, Saudi representatives meet in Jeddah, Saudi Arabia, to reconcile differences. Talks fail. Saddam reassures President Hosni Mubarak of Egypt, Saudi King Fahd bin Abdul Aziz that he will not attack Kuwait.

Aug. 2 At 1 a.m., local time, Iraq invades Kuwait, using land, air, and naval forces. President George Bush issues Executive Orders 12722 and 12723, declaring national emergency; addressing threat to national security, implications for foreign policy; freezing Kuwaiti and Iraqi assets in US; freezing trade relations. Joint Staff reviews options, including CENTCOM Operations Plan 1002-90, top-secret contingency plan to move ground troops and supporting air and naval forces to region over three to four months. CENTCOM staff starts formulating air campaign for defense of Saudi Arabia. UN Security Council, in 14–0 vote with Yemen abstaining, passes Resolution 660 calling for the unconditional withdrawal of Iraqi troops from Kuwait.

Aug. 4 At Camp David, Schwarzkopf briefs Bush, Powell, Defense Secretary Dick Cheney on concept for ground war. Also, Horner briefs concept for air campaign. USS Eisenhower battle group dispatched from Mediterranean to Red Sea. USS Independence battle group in Indian Ocean heads for north Arabian Sea.

Aug. 5 Bush vows Iraq's invasion of Kuwait "will not stand." He demands complete Iraqi withdrawal from Kuwait.

Aug. 6 Cheney, Schwarzkopf, Horner (at Bush's direction) go to Saudi Arabia to confer with King Fahd. US proposes Operation Plan 1002-90, which would place 250,000 US troops in Gulf region within three months. Fahd invites US, Coalition forces into kingdom. Cheney, Schwarzkopf return to Washington. Horner stays in Riyadh, Saudi Arabia, as "CINCCENT Forward." Bush sends to Gulf F-15 fighters from 1st Tactical Fighter Wing (Langley AFB, Va.), troops of 82nd Airborne Division (Ft. Bragg, N.C.), and maritime pre-positioning ships anchored at Diego Garcia and Guam.

Aug. 7 F-15s depart Langley for Saudi Arabia. Independence battle group arrives in Gulf of Oman, just south of Persian Gulf. US calls for other nations to send ground forces to aid defense of Saudi Arabia.


Aug. 9 UN Security Council votes 15–0 to declare Iraq's annexation of Kuwait null and void (Resolution 662). Soviets state they will not participate in military intervention in the Gulf, adding that they oppose force and unilateral actions.

Aug. 10 DOD announces operation name, Desert Shield. Warden and staff brief initial air concept plan to Schwarzkopf at MacDill. He approves. USAF, Navy, and Army units start arriving in Gulf in large numbers, stretching available facilities. F-16s from Shaw AFB, S.C., and

**INSTANT THUNDER**

As the buildup of forces began, CENTCOM Commander Gen. Norman Schwarzkopf saw that he had no capability for a ground offensive and looked to other options. “I called Colin Powell and asked that the Air Force put planners to work on a strategic bombing campaign aimed at Iraq's military, which would provide the retaliatory options we needed,” Schwarzkopf recalled in *It Doesn't Take a Hero: The Autobiography of General H. Norman Schwarzkopf*. He continued, “The plan they came up with was code-named Instant Thunder; it would ultimately become the first phase of Desert Storm.”

Gen. Chuck Horner, the CENTCOM air chief, “had not been happy that I’d asked the Pentagon for planning help,” Schwarzkopf added, but “I’d reminded him that as my forward commander in Riyadh he had his hands full and promised that he could take over once the preliminary work was done.”

The task was assigned to the Checkmate planning cell on the Air Staff, headed by Col. John Warden. The initial plan was for an operation that would last six to nine days and strike 84 targets. Schwarzkopf and Powell liked it but wanted more attention paid to the Iraqi Army. The Checkmate team went to Saudi Arabia to brief the revised plan to Horner, who thought it had serious gaps. Nor did Horner like Warden, who dismissed Horner’s concerns and spoke to him like “a university academic teaching a 101 class,” said Horner in *Every Man a Tiger*.

Horner assigned Brig. Gen. Buster C. Glosson to “take the Checkmate effort and build an executable air campaign.” Glosson set up shop in the basement of the Royal Saudi Air Force headquarters building in an area that came to the known as “the Black Hole” because of the secrecy required and because working hours were so long that people went in and were seldom seen coming out. The only member of Warden’s Checkmate team retained to work in the Black Hole was Lt. Col. David A. Deptula, who earlier that year had been the principal author of an aggressive Air Force white paper, “Global Reach-Global Power.”

The Black Hole built on Instant Thunder, making good use of continuing input from Checkmate. By January, there were 476 targets on the list, with more added as the war went along. Airpower hit not only what Warden had called strategic “centers of gravity” but also the Iraqi Army and all of the other target sets from the beginning of the operation. The air campaign wreaked 50 percent attrition on the Iraqi forces and left them reeling. The course of the Gulf War had been shaped by Schwarzkopf’s decision to request a strategic air campaign and by the quality of the plan and the caliber of the operations that came from it.
C-130s from Pope AFB, N.C., arrive. Horner draws up contingency plan for Coalition forces to fall back to Bahrain, Qatar, and UAE if Iraq attacks Saudi Arabia before sufficient defensive forces are in place. Saddam calls for Arab holy war against US troops in Gulf and “corrupt” Arab leaders who denounced his actions.

**Aug. 11** Military Airlift Command adds capabilities with Air National Guard and Air Force Reserve (AFRES) volunteers and aircraft. Strategic Air Command calls for ANG/AFRES volunteers for KC-135 tankers. Warden briefs air concept plan to Powell, who directs expanding it to ensure Iraqis cannot escape Kuwait before their tank force is destroyed. Powell suggests adding Navy and Marine aviators to Warden’s group.

**Aug. 12** Thirty-two KC-135 tankers deploy to Saudi Arabia as vanguard of tanker force soon to total more than 300 KC-10s and KC-135s. MH-53J Pave Low helicopters of 1st Special Operations Wing at Hurlburt Field, Fla., arrive in Dhahran. News pool deploys to Saudi Arabia.

**Aug. 14** Soviet Union joins US, Coalition in naval quarantine of Iraq. DOD announces presence of E-3 AWACS, KC-10s, KC-135s, and RC-135 Rivet Joints in Gulf region.


**Aug. 17** Iraqi forces in Kuwait, heavily reinforced, build defensive positions along Saudi border. Warden briefs revised concept plan to Schwarzkopf and CENTCOM staff. Schwarzkopf directs Warden to take plan to Saudi Arabia, brief it to Horner. Stage 1 of Civil Reserve Air Fleet activates for first time in 38-year history of CRAF, as 16 civilian carriers provide 18 Long-Range International passenger aircraft and crews and 21 LRI cargo aircraft and crews. Air Force Space Command establishes DSCS satellite communications links for Desert Shield. First afloat pre-positioned ships begin off-loading in Saudi Arabia. Speaker of Iraqi parliament says citizens of “aggressive” nations will be held until crisis ends, threatens use of “human shields.”

**Aug. 18** USS *John F. Kennedy* battle group deploys to Gulf.

**Aug. 19** Additional F-117 fighters deploy from Tonopah to Gulf.

**Aug. 20** More US troops, including 82nd and 101st Airborne Divisions and 24th Mechanized Infantry Division, arrive. Horner concludes air and ground strength now sufficient to defend Saudi Arabia against Iraqi invasion. Warden and his group brief concept plan to Horner in Riyadh.

**Aug. 21** USAF Gulf presence includes A-10, C-130, E-3 AWACS, F-4G, F-15, F-15E, F-16, F-117, KC-135, KC-10, and RC-135 aircraft. Needing 6,000 ANG and AFRES volunteers, USAF gets 15,000 ready to go in 72 hours. Cheney announces Saudi Arabia can now be successfully defended against attack by Iraq.

**Aug. 22** Bush issues Executive Order 12727, invoking his authority to call to active duty up to 200,000 troops and units of Selected Reserve for duration of 90 days. Second Executive Order, 12728, suspends legal provisions relating to promotion, retirement, and separation of members of armed forces. Stop-Loss action used to stabilize US military force for duration. Bush announces mobilization of 40,000 reserve forces.

**Aug. 23** Cheney issues memorandum implementing call-up of reserves, setting maximum numbers: USAF, 14,500; Army, 25,000; Navy, 6,300; Marine Corps, 3,000.

**Aug. 24** 117th Tactical Reconnaissance Wing (Birmingham, Ala.) deploys six RF-4C aircraft to Gulf, joining RF-4Cs deployed by 67th TRW (Bergstrom AFB, Tex.).

**Aug. 25** USAF F-111 fighters from RAF Lakenheath, UK, deploy.

**Aug. 27** First sealift forces arrive in Saudi Arabia.

**Aug. 28** Iraq declares Kuwait to be its 19th province. Bush, in meeting with 170 members of Congress, defines US objectives in Gulf—“immediate, complete, and unconditional withdrawal of all Iraqi forces from Kuwait, the restoration of Kuwait’s legitimate government, security and stability of Saudi Arabia and the Persian Gulf.
and the protection of American citizens abroad.”

Aug. 29 C-5 transport, flown by AFRES volunteers and carrying active duty passengers and cargo to Gulf, crashes after takeoff from Ramstein AB, Germany, killing 13 of 17.

Aug. 30 Bush urges nations around world to help pay costs, contribute personnel, equipment for Desert Shield. USAF F-16 fighters from Torrejon AB, Spain, deploy to Qatar.

**SEPTEMBER 1990**


Sept. 5 Five ANG units begin deployment of C-130H aircraft.

Sept. 8 First AC-130H gunships from 16th Special Operations Squadron (Hurlburt) arrive in Gulf.

Sept. 11 Bush, in nationally televised address to joint session of Congress, asks for continued support for Gulf policy, repeats that Iraq’s aggression “would not stand.”

Sept. 12 Iran’s supreme religious leader, Ayatollah Ali Khamenei, announces that Islamic “holy war” is justified against US and US troops in Gulf. AC-130H gunships from 16th SOS arrive in Gulf.


Sept. 16 In dispatch from Saudi Arabia, Washington Post quotes Gen. Michael J. Dugan, USAF Chief of Staff, saying US planned to unleash major bombing campaign against Iraq and that airpower would be effective.

Sept. 17 In response to Post article, Cheney fires Dugan, claiming he “showed poor judgment at a sensitive time.”

Sept. 20 Guard, Reserve maintenance personnel called from units and assigned to MAC to cover surge to wartime sortie rates. Iraq’s Revolutionary Command Council declares there will be no retreat and says “mother of all battles” is inevitable.

Sept. 23 Saddam threatens to destroy Middle East oil fields if Iraq is “strangled” by UN sanctions.

Sept. 28 Desert Shield sealift reaches peak with 90 ships at sea—69 en route to Mideast, 21 on way back for more cargo.

Sept. 29 Washington Post reports that US intelligence sources say Iraq had stockpile of biological weapons.

**THE DEPARTURE OF DUGAN**

One of the strangest events in the Gulf War story was the replacement of Gen. Michael J. Dugan in September 1990 as Air Force Chief of Staff. Dugan, a highly regarded officer whose tour as Chief had begun in July, had talked extensively with reporters who accompanied him on a trip to Saudi Arabia.

His remarks were the basis for an article, “US to Rely on Air Strikes if War Erupts,” which stretched six columns wide across the front page of the Washington Post for Sunday Sept. 16, 1990. “The Joint Chiefs of Staff have concluded that US military airpower—including a massive bombing campaign against Baghdad that specifically targets Iraqi President Saddam Hussein—is the only effective option to force Iraqi forces from Kuwait if war erupts, according to the Air Force Chief of Staff, Gen. Michael J. Dugan,” it said.

When Gen. Colin Powell, Chairman of the Joint Chiefs of Staff, saw the story that morning, he was taken aback and called Secretary of Defense Dick Cheney, who was outraged. Cheney told his military assistant to have Dugan report to him at 8 a.m. Monday and on a yellow legal pad, he made a list of problems with what Dugan had said. The main ones were “egregious judgment,” the “potential revelation” of classified information, and denigration of the role of the other services.

The next morning, Cheney relieved Dugan as Air Force Chief. That led to a potentially awkward situation since Cheney was scheduled to deliver the keynote address to the Air Force Association national convention two hours later. Cheney went to AFA, spoke, did not mention Dugan, returned to the Pentagon and announced to a press conference that he had fired Dugan for “lack of judgment,” “wide-ranging speculation,” “demeaning the contributions of other services,” and discussing “the substance of operational matters.” Gen. Merrill A. McPeak, Commander in Chief of Pacific Air Forces, was named as the new Chief.

It requires imaginative interpretation to find anything that could be described as revelation of classified information in the Post article, and as one former defense official said, if demeaning the contributions of others services was grounds for dismissal, “there wouldn’t be any admirals left in the Navy.” Nor was Dugan all that wrong in his assessment. “In fact” said Michael R. Gordon and Gen. Bernard E. Trainor in their book, The Generals’ War, “when the air campaign was launched, it went pretty much as Dugan had said.”
**OCTOBER 1990**

Oct. 1 British Prime Minister Margaret Thatcher rejects any negotiations with Iraq.


Oct. 4 *Independence* exits Gulf.

Oct. 10 USAF fighter units arriving in area of responsibility fly training sorties to prepare for desert warfare. F-15C combat air patrol is now routine. In US, small anti-war movement emerges. Relatives of some troops deployed to Gulf participate in Capitol Hill protest against Desert Shield.

Oct. 15 *L’Express* of Paris publishes article describing four-stage US plan to attack Iraq: (1) US Air Force destroys Iraqi air force; (2) US Air Force destroys Iraq’s military industries; (3) US Special Forces cut out Iraqi communications lines; (4) US Army and Marines invade Kuwait. According to *L’Express*, the operation would take four days and would cost 20,000 US casualties.


Oct. 30 MAC launches Desert Express, overnight airlift to Gulf of critical items. Bush tells White House meeting of 15 Congressional leaders that he is growing impatient with absence of progress in Gulf and with “barbarous” treatment of US and other Western hostages in Iraq, factors that some interpret as signal that President is considering military action against Iraq.

**NOVEMBER 1990**

Nov. 8 Bush announces US will deploy additional armed forces to provide Coalition in Persian Gulf with offensive option. Press speculates total would be about 150,000 to 200,000 armed forces personnel, added to 230,000 already in Gulf region.

Nov. 9 DOD announces deployment of Theodore Roosevelt, *America*, and *Ranger* battle groups to Gulf. Several Republican Senators say Bush should call special session of Congress to approve President’s plans for new military deployments in Gulf. Administration rejects proposal.

Nov. 13 Bush issues Executive Order 12733, extending by 90 days the active duty period of those called up under 10 USC 673b. Congressional leaders announce Congress will hold hearings on Persian Gulf in December. Some believe Congress should call special session to consider legislation giving Bush authority to launch offensive actions against Iraq without declaration of war.

Nov. 14 Hospitals at two bases in Britain and one in Germany prepare to receive casualties. Cheney authorizes activation of some 72,500 reservists that might be needed in Saudi Arabia.

Nov. 15 Bush tells CNN that world remains united against Saddam and Iraq’s aggression against Kuwait. President says he has not made decision to launch offensive action against Iraq but maintains all options. President says he would continue to consult with Congress but dismisses need for special session of Congress to discuss Persian Gulf problem.

Nov. 17 Air Force Space Command repositions DSCS II satellite over Indian Ocean to improve communications support for Desert Shield.

Nov. 20 Forty-five members of House of Representatives file suit in US District Court in Washington to force Bush to seek Congressional approval before launching attack against Iraq.

Nov. 21 OA-10s from Davis-Monthan AFB, Ariz., deploy.

Nov. 22 Bush spends Thanksgiving in Gulf with US
THE SECOND FRONT

As Coalition forces poured into Saudi Arabia and the Gulf states to the south of Iraq, USAF planners in Germany pointed to the advantage of opening a second front in the north, with operations from Incirlik AB, Turkey. The idea was briefed upward through channels and the Joint Chiefs of Staff concurred. The key question was whether Turkey would agree.

While talks with Turkey progressed, US European Command formed Joint Task Force Proven Force under Air Force Maj. Gen. James L. Jamerson. The air component was a composite wing commanded by Brig. Gen. Lee Downer. European Command would keep operational control of the force with CENTCOM exercising tactical control. From bases all around Europe, additional aircraft were positioned at Incirlik.

At mid-day on Jan. 17, the first day of the war, the Turkish parliament approved “cross border” operations from Incirlik. Aircraft, people, and equipment were still arriving as the first strikes were launched a few hours later. For the remainder of the war, the Joint Task Force flew at least two or three missions a day. Downer eventually had about 130 aircraft at his disposal, including fighters, electronic support aircraft, F-4G Wild Weasels, E-3 Airborne Warning and Control System aircraft, and aerial tankers sent by Strategic Air Command. In addition to the strategic value of the strikes themselves, the Incirlik operation tied down 100,000 Iraqi forces in the north.

Nov. 20 Troops. EC-130 psychological operations aircraft broadcast Voice of America into Kuwait. Bush warns that Iraq is developing nuclear weapons.

Nov. 26 House Foreign Affairs Committee, House Armed Services Committee, Senate Foreign Relations Committee, and Senate Armed Services Committee begin hearings on Gulf crisis.

Nov. 29 UN Security Council passes Resolution 678, authorizing use of force to expel Iraq from Kuwait. Resolution allows grace period, giving Iraq “one final opportunity” to comply with previous resolutions.

Nov. 30 Saddam rejects Bush’s offer to send Secretary of State Baker to Baghdad. Two former JCS Chairmen, retired USAF Gen. David C. Jones and retired Adm. William Crowe, tell Senate Armed Services Committee that US should not rush into war with Iraq and should wait for economic sanctions to take effect.

DECEMBER 1990

Dec. 1 DOD enacts Stop-Loss authority (contained in Aug. 22 Executive Order) to prevent retirement or separation of troops having critical skills. Advisor to Soviet President Mikhail Gorbachev says USSR will not send troops to Persian Gulf.

Dec. 2 More F-117 stealth fighters deploy.

Dec. 3 Call-up alerts go to three ANG units: 169th Tactical Fighter Group (McEntire ANGB, S.C.); 174th TFW (Syracuse-Hancock IAP, N.Y.); and 152nd Tactical Reconnaissance Group (Reno-Tahoe IAP, Nev.). AFRES 926th TFG (New Orleans) also alerted.

Dec. 5 152nd TRG, with RF-4Cs, deploys to Saudi Arabia to replace 117th TRW aircraft and personnel.

Dec. 6 Saddam announces he will release all civilian hostages held since beginning of crisis.

Dec. 8 First European Desert Express mission undertaken.

Dec. 19 Army Lt. Gen. Calvin Waller, CENTCOM second in command, tells press US forces won’t be combat-ready by Jan. 15 deadline set in Resolution 678. Waller says forces won’t be ready until late January or mid-February. However, over next few days, Pentagon and White House say US forces are ready and can respond to Iraqi attack if one is launched.

Dec. 20 ANG KC-135E units alerted for call-up. By end of year, SAC has 200 tankers in Gulf.

Dec. 21 USAF EF-111s deploy to Gulf.

Dec. 29 F-16-equipped 169th TFG deploys to Saudi Arabia, first ANG fighter unit to do so.

JANUARY 1991

Jan. 2, 1991 ANG’s 174th TFW deploys 18 F-16s to Saudi Arabia and, along with 169th TFG, is incorporated into 4th TFW (Provisional). CENTCOM announces US strength in Gulf exceeds 325,000.

Jan. 8 DOD announces US troop strength in Gulf is 360,000. Analysts estimate 540,000 Iraqi troops in or near Kuwait. Bush sends letter to Congress asking for resolution approving President’s use of “all necessary means” to remove Iraq from Kuwait.

Jan. 9 In Geneva, Baker meets with Iraqi Foreign Minister Tariq Aziz, but talks fail.

Jan. 10 House and Senate begin debate on possible war.
**Jan. 12** Congress, after intense debate, clears US forces for war against Iraq. House votes 250–183 to authorize President to use military force to implement UN Resolution 678 to force Iraq to withdraw from Kuwait. Senate votes 52–47 in favor of same authorization.

**Jan. 13** UN Secretary General Javier Perez de Cuellar meets with Saddam, concludes there is little hope for peace.

**Jan. 15** Deadline for Iraq’s withdrawal from Kuwait passes. DOD announces US has 415,000 troops in Gulf, opposed by 545,000 Iraqi troops.

**Jan. 16** CENTCOM announces 425,000 US troops in theater, supported by ground forces of 19 nations and naval efforts of 14 nations. First elements of USAFE Joint Task Force Headquarters deploy from Ramstein AB, Germany, to Incirlik AB, Turkey, and prepare to establish USAF’s first wartime composite wing. Seven B-52Gs, launching from Barksdale AFB, La., become first aircraft to take off on Desert Storm combat mission; BUFFs of 596th Bomb Squadron, 2nd Bomb Wing, carry super-secret, never-before-used AGM-86C Conventional Air Launched Cruise Missiles.

**Jan. 17** Coalition air forces launch Desert Storm at about 3 a.m. local time (7 p.m. Eastern Standard Time on Jan. 16). Barksdale B-52Gs arrive over Saudi Arabia, launch 35 CALCMs against high-value Iraqi targets, return to Barksdale, completing 14,000-mile, 35-hour non-stop mission-longest strike mission in history of aerial warfare. Coalition seeks to gain air superiority, destroy Iraq’s special weapons capability, disrupt command and control. USAF Capt. Jon Kelk of 33rd TFW (Eglin AFB) shoots down Iraqi MiG-29 at 3:10 a.m. in first air-to-air victory. Coalition forces fly more than 750 attack sorties from land bases during early morning and day. US Navy launches 228 combat sorties from six carriers in Red Sea and Arabian Gulf. Turkey approves USAF use of Incirlik and Turkish airspace to open northern front against Iraq. USAFE immediately deploys aircraft to Turkey. One Navy F/A-18 pilot shot down and listed initially as killed in action. (The saga of Michael S. Speicher would continue for 18 years, as his status changed from KIA to missing in action to MIA/captured, back to MIA, and finally KIA when his remains were positively identified in August 2009.) Two Naval aviators captured after their A-6E is shot down. Two USAF airmen are killed when their F-15E is shot down.

**Jan. 18** Iraq launches Scud missiles against Israel, Saudi Arabia. Cheney activates CRAF Stage 2, raising total draw from airlines to 79 passenger aircraft and 108 civilian cargo aircraft.

**Jan. 19** An F-15E from the 4th Fighter Wing (Seymour-Johnson AFB, N.C.) shot down; pilot (Col. David W. Ebely would be senior POW) and weapons systems officer taken prisoner. Two F-16Cs from 614th Tactical Fighter Squadron (Torrejon AB, Spain) shot down; pilots taken prisoner. Three more Scuds hit Israel, injuring 10. Iraq parades seven Coalition airmen on television. US delivers to Israel two batteries of Patriot anti-aircraft missiles and US Army personnel to operate them. Bush signs Executive Order 12743, allowing him to call to active duty Ready Reservists and to extend tour of duty from six months up to two years for 160,000 reservists already activated.

**Jan. 20** First Purple Heart of war awarded to Navy corpsman hit by shrapnel Jan. 17 while on Marine patrol near Kuwaiti border. USAF fighter-bombers attack Iraqi nucle-
Iraq's most effective offensive weapon—its Scuds—was a failed attempt at a large, last-ditch attack. The Iraqis launched a total of 93 Scuds: 42 at Israel, 48 at Saudi Arabia, and three at Bahrain. One of the hits was on a US barracks in Dhahran in Saudi Arabia, killing 28 soldiers and wounding 97. The last Scud launch against Israel was Feb. 25. Two days later, a USAF airstrike, cued by special operations forces on the ground, destroyed a force of Scuds that appeared to have been assembled for a large, last-ditch attack.
Jan. 29 US and USSR announce cease-fire possible if Iraq makes “unequivocal commitment” to withdraw all troops from Kuwait and takes “concrete steps” in that direction. In State of Union address, Bush repeats US goal is to “drive Iraq out of Kuwait, to restore Kuwait’s legitimate government, and to ensure the stability and security of this critical region.” Joint STARS detects 50 Iraqi tanks moving toward Saudi Arabia. Using deception, 1,500 Iraqi troops in three battalions attack Khafji in Saudi Arabia, come under Coalition air attack. For first time, Coalition ground forces counterattack. Elements of 1st Marine Division engage with anti-tank and automatic weapons.

Jan. 30 Marines lose three armored vehicles in battle for Khafji, while Iraqis lose 24 tanks, 13 armored vehicles. USAF fighter-bombers destroy oil pumping pipes and manifolds to stop one of biggest-ever oil spills. Commanders report US has lost 12 aircraft, UK five, Italy and Kuwait one each. Two US soldiers (one is first US female military member taken prisoner) are captured by Iraqi soldiers at Iraqi-Saudi border.

Jan. 31 AC-130H gunship, supporting Marines around Khafji, is shot down by Iraqi infrared surface-to-air missile, with 14 crew members killed. Saudi troops, assisted by Qatari forces, US Marines, heavy air support, recapture Khafji. Coalition aircraft attack, rout two Iraqi divisions assembling north of Khafji for attack.

FEBRUARY 1991

Feb. 1 Iraqi force, estimated at 60,000, masses for attack near Kuwaiti town of Al Wafra. Airstrikes drive Iraqis into defensive positions. Bush tells military families at Ft. Stewart, Ga., Iraq would not dictate when ground offensive would begin, and ground war would be launched only if needed.

Feb. 2 B-52 bomber goes down in Indian Ocean, returning to Diego Garcia after mission over Kuwait. Three crew members rescued, three lost.

Feb. 3 Iraq withdraws troops from Khafji area.

Feb. 4 Battleship Missouri uses 16-inch guns to pound Iraqi concrete bunkers in Kuwait, part of plan to deceive Iraqis into expecting Marine amphibious invasion. USAF fighter-bombers attack major targets at Tikrit, Saddam’s home village 90 miles north of Baghdad. Coalition aircraft fly 2,566 sorties, bringing to 43,566 the total for first 19 days of war.

Feb. 5 Iranian President Ali Akbar Hashemi Rafsanjani offers to mediate between Iraq, US. USAF fighter-bombers attack Scud missiles, launchers. B-52s hit Republican Guard positions. Missouri knocks out two artillery emplacements, damages four others. Missouri destroys radar site and surface-to-air missile position along Kuwait coast. At news conference, Bush says he is skeptical that air war alone can achieve desired result of removing Iraq from Kuwait.

Feb. 6 Capt. Robert Swain, 706th TFG (AFRES), shoots down Iraqi helicopter over central Kuwait in first aerial victory by A-10. RAF knocks out key bridge across Tigris in Baghdad. US reports Coalition aircraft have flown nearly 50,000 sorties, one-half of them combat attacks against Iraqi targets. (By this date, US combat casualties include 21 missing in action and 13 Prisoners of War.) US troop strength reaches 503,000, other Coalition troop strength reaches 200,000.

Feb. 7 Cheney and Powell head to Gulf for meeting with Schwarzkopf on air offensive and pending ground offensive. Some 21 House members send letter to Bush, urging President not to launch ground war because air war is succeeding and ground war would increase Coalition casualties. US officials say 109 Iraqi fighter aircraft and 23 Iraqi transport aircraft have flown to Iran.

Feb. 8 As Iraqi-caused oil slick drifts down Gulf, Saudi desalination plant at Safaniya stops operation as precautionary measure.

Feb. 9 Scud hits Israel, injuring 26. Cheney, Powell meet for eight hours with Schwarzkopf. “Tank plinking”—picking off individual tanks with smart weapons—begins. Coalition sources tell press that 15 percent of Iraq’s armor, about 600 tanks, and between 15 percent and 20
THE WEINBERGER DOCTRINE

In a speech Nov. 28, 1984, at the National Press Club, Secretary of Defense Caspar W. Weinberger declared that he had developed a series of “tests to be applied when we are weighing the use of US combat forces abroad.” (It became known as “the Weinberger Doctrine,” although oftentimes it is cited, incorrectly, as “the Powell Doctrine.” Colin Powell was Weinberger’s military assistant and held similar views, but Powell himself has said that he first saw the doctrine when Weinberger asked him to look at it in draft.)

Weinberger’s six tests: Is a vital national interest at stake? Are we willing to commit enough troops and resources to win? Will we sustain that commitment? Are the political and military objectives clearly defined? Is there reasonable expectation that the public and Congress will support the decision? Have we tried other measures to achieve our objectives before sending forces into combat as a last resort?

Unlike Vietnam, the Bay of Pigs, and the Desert One fiasco in Iran, the Persian Gulf War met all the conditions. Some critics dismissed the Weinberger Doctrine as a willingness to fight only popular wars, but others agreed that it captured the right approach for deciding when and how US forces should be committed to combat.

percent of overall fighting ability destroyed thus far in air war.

Feb. 10 Soviet Foreign Minister Eduard Shevardnadze tells Baker that Moscow will not deploy troops with the multinational effort in Saudi Arabia because of opposition at home.

Feb. 11 Coalition aircraft fly 2,900 attack sorties, bringing to 61,862 the total for 26 days of air war.

Feb. 12 Air attack destroys three downtown Baghdad bridges—Martyr’s Bridge, Republic Bridge, and July 14 Bridge. Soviet envoy Primakov stops in Tehran en route to Baghdad, carrying Soviet peace plan. Saddam tells Primakov that Iraq would cooperate with efforts to arrange cease-fire in Gulf War.

Feb. 13 F-117 fighters bomb building in Baghdad that Coalition forces believe to be military command bunker but which is being used as civilian air-raid shelter, and 200–400 civilians are killed. Iraqi armored division, caught moving at night, is destroyed by airpower.

Feb. 14 RAF Tomado is shot down by missile over Baghdad. Two USAF crewmen killed when EF-111A is lost in Saudi Arabia after mission over Iraq. Back in US, anti-war demonstrators splash blood and oil on Pentagon doorway.

Feb. 15 Saddam’s five-man Revolutionary Command Council announces that Iraq is ready “to deal” with UN resolution requiring withdrawal from Kuwait. US officials estimate three months of war against Iraq will cost $56 billion, of which US would pay $15 billion and other Coalition members would pay $41 billion.

Feb. 16 Two Scuds hit southern Israel.

Feb. 17 Heavy bombing of Iraqi army in Kuwait has, by this date, destroyed 1,300 of Iraq’s 4,280 tanks and 1,100 of 3,110 artillery pieces, the Pentagon reports. Iraq’s foreign minister, Aziz, arrives in Moscow for talks with Soviet President Gorbachev.

Feb. 18 Two US Navy vessels, amphibious assault ship Tripoli and guided missile cruiser Princeton, strike mines in Gulf, take significant damage. Iraqi Foreign Minister Aziz returns to Baghdad with peace proposal from Gorbachev. Soviet Union offers four-point peace plan: (1) unconditional Iraqi withdrawal from Kuwait; (2) protection for Iraqi territorial integrity; (3) no punishment of Saddam or other Iraqi leaders; (4) talks about other Middle Eastern problems, particularly Palestine problem.

Feb. 19 Bush declares Soviet peace proposal inadequate. Mixed force of F-4Gs and F-16s from composite wing in Turkey launch daylight attack on Baghdad from north. Coalition flies record 3,000 attack sorties; total for 34 days of air war rises to 83,000.

Feb. 20 US Army engages Iraqi reconnaissance unit, destroying five tanks, 20 artillery pieces.

Feb. 21 Iraq fires three Scuds toward King Khalid Military City in Saudi Arabia. Coalition holds 2,500 Iraqi POWs. After meetings in Moscow with Iraqi Foreign Minister Aziz, Soviets announce that Iraq accepts Soviet peace proposal.

Feb. 22 US announces that F-15s of 33rd TFW (Eglin)
have downed 15 Iraqi aircraft. Bush gives Iraq until 8 p.m. local time (Feb. 23) to begin withdrawing troops from Kuwait. Iraqi forces set fire to some 150 oil wells and other oil installations in Kuwait. White House estimates total cost of war would be $77 billion and that other Coalition members will pay about $54 billion.

**Feb. 23** B-52s pound Iraqi positions. Iraqis set 100 more Kuwaiti oil wells on fire. Total of Coalition attack sorties flown during air war reaches 94,000. Schwarzkopf determines attrition of Iraqi combat effectiveness is sufficient for successful ground offensive with few casualties.

**Feb. 24** G-Day. Coalition ground forces embark on what turns out to be a 100-hour campaign. Tanks fitted with bulldozer blades punch holes in Iraqi defenses. Air war enters final phase—support for Coalition ground forces. Schwarzkopf throws 100,000 troops into assault on Iraqi forces, which surrender in large numbers. Coalition attack sorties total 97,000.

**Feb. 25** Scud hits Dhahran barracks used by US Army Reservists, killing 28, wounding more than 100. Baghdad Radio airs Saddam order for Iraqi forces to withdraw from Kuwait. At least 517 oil wells in Kuwait on fire. US and French forces secure Coalition western flank inside Iraq. US Army 101st Division moves north to An Nasiriyah on Euphrates River. US 24th Mechanized Infantry Division turns east to cut off possible Iraqi avenues of retreat north from Basra. US and British armored units move eastward toward Iraqi Republican Guards armored divisions along Kuwait-Iraq border.

**Feb. 26** “Mother of all retreats” features Iraqi soldiers attempting to escape envelopment of Kuwait. Thousands of military, civilian vehicles, loaded with looted goods, clog four-lane highway out of Kuwait City. Repeated air attacks destroy much of panicked army’s equipment. Coalition forces engage Republican Guards between Kuwait-Iraq border and Basra. Other Coalition forces seize Kuwait City and Al Jahrah.

**Feb. 27** Coalition liberates Kuwait City, envelops Iraqi forces. Coalition, Iraqi units fight largest tank battle since World War II Battle of Kursk between Germans and Soviets: Two Army divisions decimate two Republican Guard divisions. Two specially made 4,700-pound GBU-28 bombs destroy “impregnable” Iraqi command bunker at Al Taji. Coalition attack sorties reach one-day record of 3,500. Bush announces that Coalition forces would suspend offensive operations the next day at 8 a.m. local time. Bush says Iraq must end military action, free all POWs, third country nationals, and Kuwaiti hostages, release remains of Coalition forces killed in action, agree to comply with all UN resolutions, and reveal location of land and sea mines.

**Feb. 28** Fighting stops. Iraq agrees to observe ceasefire, attend military-to-military talks on cessation of hostilities. Coalition air forces fly 3,500 sorties, for total of 110,000. Iraqi Foreign Minister Aziz notifies UN Security Council that Iraq accepts 12 UN resolutions dealing with invasion of Kuwait. DOD says Coalition forces destroyed or rendered ineffective 42 Iraqi divisions, captured more than 50,000 Iraqi prisoners, destroyed or captured 3,000 of 4,030 tanks in southern Iraq and Kuwait, and destroyed or captured 962 of 2,870 armored vehicles, 1,005 of 3,110 artillery pieces, 103 of 639 aircraft (with another 100 or so in quarantine in Iran). Coalition forces continue to destroy captured and abandoned Iraqi armor and artillery. Coalition airplanes flew 110,000 sorties over Iraq and Kuwait, one-half of which were combat and one-half support (reconnaissance, air refueling, search and rescue, etc.) US casualties are reported as 79 killed in action, 212 wounded in action, 45 missing in action, nine POWs. (Numbers later revised to 147 killed in action (including four who died of their wounds) and 26 initially

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**MEDALS AND DECORATIONS**

US military members who participated in the Gulf War are authorized to wear several decorations. The main one is the **Southwest Asia Service Medal** (at top below), for service in Desert Shield or Desert Storm between Aug. 2, 1990, and Nov. 30, 1995, while based in Bahrain, Kuwait, Iraq, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. (The award includes designated sea areas, as well.) It is also authorized for those who directly supported combat operations from duty locations in Egypt, Israel, Jordan, Syria, or Turkey, between Jan. 17, 1991, and Nov. 30, 1995. The medal is not authorized for those whose duty was performed from bases in Europe, the Pacific, or the United States.

Participants are authorized to wear **bronze service campaign stars** (maximum of three) for these designated campaigns:

- **Liberation and Defense of Kuwait, Jan. 17, 1991-April 11, 1991**
- **Southwest Asia Cease Fire Campaign (includes Operation Provide Comfort), April 12, 1991-Nov. 30, 1995**

There are two Kuwait Liberation Medals. The **Kuwait Liberation Medal awarded by Saudi Arabia** (middle below) is for members of the military Coalition who participated in operations between Jan. 17, 1991, and Feb. 28, 1991, in Bahrain, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, the United Arab Emirates, and designated sea areas.

The **Kuwait Liberation Medal awarded by Kuwait** (below at bottom) is for members of the military Coalition who participated in operations between Aug. 2, 1990, and Aug. 31, 1993, in Bahrain, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, the United Arab Emirates, and designated sea areas.
listed as missing in action), 467 wounded in action, and 21 POWs—eight USAF, five Army, three Navy, and five USMC.

MARCH 1991

March 2 Sporadic fighting erupts. Members of Iraqi tank column, evidently confused, come in contact with US troops, start shooting. Battle of Rumaila leaves 60 Iraqi tanks destroyed. Coalition forces occupy southeast corner of Iraq. Coalition air forces maintain “air occupation” of Iraq.

March 3 At Safwan in Iraq, Schwarzkopf and Lt. Gen. Khalid bin Sultan, Saudi commander of Joint Arab-Islamic Force, and their associates from other Coalition countries, meet eight Iraqi officers, led by Lt. Gen. Sultan Hashim Ahmad, commander of Iraqi III Corps in Iraq. Military leaders discuss cease-fire arrangements, including POW and detainee exchange, minefield locations, avoiding contact that could lead to armed clashes, and Coalition withdrawal as soon as formal cease-fire is signed. CENTCOM reports Iraqi equipment destroyed or captured increased to 3,300 tanks, 2,100 armored vehicles, and 2,200 artillery pieces, and number of POWs increased to 80,000. Iraq releases 10 Coalition POWs, including six Americans (one is first woman POW, Army Spec. Melissa Rathburn Nealy.)

March 6 Iraq releases remaining Coalition POWs, including 15 US military personnel.

March 8 1st TFW returns in victory to Langley AFB, Va. Other early returning units include 42nd Bomb Wing (Loring AFB, Maine) and 55th and 9th SOSs (Eglin AFB, Fla.).

March 10 Former POWs return to Andrews AFB, Md., met by Cheney, Powell, several thousand spectators.

March 19 Redeployment of 545,000 US troops stationed in Gulf officially begins.

APRIL 1991

April 11 Iraq accepts all terms of UN cease-fire resolution. Gulf War officially ends April 11, 1991, at 10 a.m. EST.


DESERTSPEAK


AOR. CENTCOM’s Area of Responsibility, but often used as shorthand for the Kuwait Theater of Operations.

Big Red. The desert sun.

Black Hole. Lair of the Gulf War planners in the basement of Saudi Air Force headquarters.

Bob. Any Iraqi or Bedouin.

Bud Lights. Infrared beacons to identify friendly forces and vehicles from above.

Chocolate chips. Battle dress uniform in desert camouflage.

Dimpie. Desired Mean Point of Impact for bombing.

Kill box. Square grid, 15 miles on each side, within which F-16 “killer bee” scouts and other forward air controllers marked targets and directed attacks.

Push CAS. Dispatch of close air support fighters, without request from ground commander, to be available if needed.

Pogue. Anybody who got there after you did.

Sammy. Saddam Hussein.

Scud Alley. Area in western Iraq from which Scud missile teams operated, hiding by day and shooting by night.

Tank plinking. Picking off individual tanks at night from the air with precision-guided munitions.
Crisis in the Gulf

In the summer of 1990, the Cold War was almost over. The Berlin Wall had fallen and the Soviet Union was on its last legs. The United States was drawing down its armed forces and cutting its defense budget. A headline in the New York Daily News, "Pentagon Needs a Few Good Enemies," expressed the prevailing belief that military danger was fading away. In particular, there were questions about the need for a strong Air Force in the coming era of peace.

Nobody in a position of senior authority at the Pentagon, the State Department, or the CIA saw Iraq as a serious concern, even when Iraqi dictator Saddam Hussein threatened to invade Kuwait to resolve oil rights issues and other grievances. The State Department objected when US Central Command cast Iraq (thinly disguised as "a country to the north") as the aggressor in a wargame. The scenario for the game was an Iraqi invasion of the Arabian Peninsula. Despite the oil crises of the 1970s, the Middle East was regarded as a military theater of secondary importance, after Europe and Pacific.

On Aug. 2, Saddam invaded Kuwait. It was not clear he was going to stop there. He was in position to invade Saudi Arabia as well and to catastrophically disrupt the international oil supply. The United States demanded that Saddam withdraw from Kuwait and began marshaling support from allied countries.

Iraq had the world’s fourth largest army with 900,000 troops. Armored divisions had Soviet T72 tanks. Iraq also had the world’s sixth largest air force. Many of its airplanes were obsolete, but Iraq also had MiG 29 interceptors, MiG 27 and Mirage F-1 fighters, Su-24 strike aircraft, Tu-16 and Tu-22 bombers, Soviet-built Scud surface-to-surface missiles, and an integrated air defense system with surface-to-air missiles and anti-aircraft guns.

After the war, it would be popular to claim that Iraq had been a pushover, but it did not seem so beforehand. Senior military officials expected a violent clash of land armies, with some casualty estimates running as high as 45,000.
In the US military scheme of things, Iraq and Saudi Arabia lay within the area of responsibility of US Central Command, a joint command that grew out of the old Rapid Deployment Joint Task Force. CENTCOM consisted full time of a headquarters and staff in Tampa, Fla., and drew its fighting strength, when needed, from its Air Force component, 9th Air Force at Shaw AFB, S.C., and its Army component, 3rd Army at Ft. McPherson, Ga.

The CENTCOM commander was Army Gen. H. Norman Schwarzkopf, often called “Stormin’ Norman,” which was an apt description of his demeanor. The Gulf War would be the first war since the passage in 1986 of the Goldwater-Nichols Act, which had empowered theater commanders to organize and employ their forces as they saw fit.

The first requirement was to defend Saudi Arabia. Iraq had 27 divisions in Kuwait and there was not much to stop them from heading south. The first US armored divisions would not arrive until Sept. 24. Schwarzkopf turned to his airpower. On Aug. 8, the first C-141 arrived in the Gulf, carrying an airlift control element. It was closely followed by F-15s and a contingent of the 82nd Airborne.

Thirty-eight hours after they were notified to deploy, F-15s were flying defensive patrols along the Iraq-Saudi border, 7,000 miles from home. On Aug. 10, the Pentagon announced the name of the operation as “Desert Shield.” By Aug. 12, USAF had 120 fighters in the theater. Within 35 days, coalition fighter forces were equivalent in size to Iraq’s.

Saddam made a critical mistake. He allowed the US and its allies time to respond and prepare, and they made the most of it. Meanwhile Saddam did what he did best: boast and bluster. In August, he told an Iraqi newspaper: “The US depends on the Air Force. The Air Force has never decided a war in the history of war.” In September, he told his minions to “prepare for war with the United States. Let everybody understand that this battle will become the mother of all battles.”
CENTCOM commander Schwarzkopf made a preliminary visit to Saudi Arabia in early August, then returned to his Florida headquarters to put together his plan. He left his air component commander, Lt. Gen. Charles A. Horner, in Riyadh as “CENTCOM Forward.”

Surveying his options, Schwarzkopf decided to begin with a strategic air campaign and count on it to reduce the enemy ground forces by 50 percent before he would commit the coalition ground forces to battle.

Under the joint approach to warfare established by the Goldwater-Nichols Act, Horner was the joint force air component commander, a difficult role to execute because the other services do not like to yield control of their airpower. Centralized control of airpower had been attempted in previous wars. It worked a little better than usual in the Gulf, in part because of Horner’s leadership abilities. He cultivated a rough-and-ready image, but it was quickly obvious that he was smart, well-informed, and keenly attuned to building trust and teamwork.

Of the US combat aircraft in Desert Storm, 58 percent were from the Air Force, 27 percent from the Navy, and 15 percent from the Marine Corps. As JFACC, Horner exercised his authority through the air tasking order, or ATO. Everyone accepted the need to coordinate operations and to provide safe separation of the thousands of sorties each day in limited airspace, but allocation and control of airpower was something else. Navy integration into the ATO was limited, mostly for technical reasons, and the Marine Corps resisted integration of air assets. The marines referred to the JFACC as the joint force “air coordinator” instead of the “air component commander.” The Army flew its helicopters with few constraints from the JFACC. Some helicopter sorties were in the ATO. Most were not.

As usual in war, the ground commanders wanted more air strikes on the enemy force directly in front of them, and they blamed Horner for not getting them. Actually, Horner was following directions from Schwarzkopf, who wanted the bombing emphasis on the elite Republican Guard units rather than on the regular Iraqi units strung out along the border.
It did not take long for USAF airlifters and tankers to set up an air bridge from the United States to Saudi Arabia, providing for a steady flow of aircraft, equipment, and personnel to the theater. It required 80 percent of Military Airlift Command’s C-141s and 90 percent of the C-5s, and even that was not enough. For the first time, the Air Force activated the Civil Reserve Air Fleet, mobilizing commercial cargo and passenger airplanes to augment the military airlifters.

The Desert Shield/Desert Storm airlift still stands as the largest in history, 10 times more ton-miles per day than the Berlin Airlift. Before it ended, the airlift had moved more than 482,000 passengers and 513,000 tons of cargo into the war zone—the equivalent of moving Oklahoma City—all of its people, all of its vehicles, all of its food, and all of its household goods—halfway around the world. MAC also operated the “Desert Express,” overnight airlift to the Gulf of critical items. Pressure on the air bridge was moderated by supplies aboard pre-positioned cargo ships and by sealift, which began deliveries several weeks into the crisis.

The aerial refueling part of the air bridge was provided by Strategic Air Command KC-135 tankers and KC-10 cargo tankers. Ultimately, about 300 SAC tankers, approximately half of the total fleet, were used in the Gulf War operation. It took nearly 100 tankers operating from en route bases to create the Atlantic air refueling bridge and a less frequently used Pacific bridge. For fighter aircraft, requirements for the trip ranged from seven refuelings (for F-15Es) to 15 (for F-4Gs).

Tankers also provided local air bridges within the theater, where 60 percent of the attack sorties required refueling. The demand was intense, but more tanker aircraft would not have helped. The limitation was airspace available for refueling tracks. Along the Saudi Arabian border, each tanker was stacked 500 feet below the one ahead of it. Other nations provided some of the coalition refueling capability, mostly for their own aircraft, but SAC tankers were the main resource.
From the beginning, the United States sought international support and participation in the effort to roll back the invasion. Saddam made the task easier Aug. 8, when he declared Kuwait to be the 19th province of Iraq and took foreigners hostage in Iraq and Kuwait. The next day, the UN Security Council declared Iraq’s annexation of Kuwait null and void. Subsequently, the Security Council authorized use of force to expel Iraq from Kuwait.

The coalition eventually grew to 38 nations, with 13 of them providing combat aircraft. A dual chain of command evolved, with Schwarzkopf as head of the non-Islamic forces. The senior commander of the Arab forces was Prince Khalid Bin Sultan, a lieutenant general and commander of the Royal Saudi Air Defense Forces. Khalid had degrees from Sandhurst and Auburn University and got along well with Schwarzkopf and Horner. Relationships were made easier still because the Saudi ambassador to the United States was Prince Bandar bin Sultan, a former F-15 pilot.

By the end of December 1990, the coalition fielded 2,614 aircraft, of which 1,990 were American. The United States contributed the largest share of combat aircraft (1,193) and support aircraft (897). Saudi Arabia was next in the number of combat aircraft (216), followed by the United Kingdom (90) and France (48). Among the coalition aircraft were various models of the Tornado, which was flown by the UK, Saudi Arabia, and Italy. American-made F-16s, F-15s, and F-5s were flown by other coalition nations, as were Anglo-French Jaguars and various models of French Mirages.

Among the nations sending support aircraft was South Korea, which provided four C-130s. The aircraft themselves were of value, but the commitment was special in another way: It was the first time the Republic of Korea Air Force had ever deployed for a foreign operation.

At the peak of the conflict, non-US air forces flew about 100 combat sorties a day. Allied aircraft flew 14 percent of the total sorties in the Gulf War, and of the 38 coalition aircraft lost in combat, 11 were from allied nations.
Caught by Surprise
"Iraq is not expected to use military force to attack Kuwait or Saudi Arabia to seize disputed territory or resolve a dispute over oil policy."—US Central Command intelligence assessment, May 1990.

Don't Go Wobbly
"Remember, George, this is no time to go wobbly."—British Prime Minister Margaret Thatcher in telephone call, Aug 26, 1990.

Lack of Rational Necessity
"War is not the only option left. Our policy in the Persian Gulf is not broken and it cannot be fixed by war. There is still time to save the President from himself —and save thousands of American soldiers in the Persian Gulf from dying in the desert in a war whose cruelty will be exceeded only by the lack of any rational necessity for waging it."—Sen. Edward M. Kennedy (D-Mass.), January 1991.

No Longer Tanks
"The air war, obviously, was very, very effective. ... In the earlier phases we made great progress in the air war. In the latter stages ... they—the enemy—had burrowed down in the ground as a result of the air war. Now that, of course, made the air war a little bit tougher, but when you dig your tanks in and bury them, they're no longer tanks. They're now pill boxes."—Schwarzkopf, news briefing from Riyadh, Saudi Arabia, Feb. 27, 1991.

Powell's Doubts
"Many experts, amateurs and others in this town believe that this can be accomplished by such things as surgical air strikes or perhaps a sustained air strike. And there are a variety of other nice, tidy, alleged low-cost, incremental, may-work options that are floated around with greater regularity all over this town. ... One can hunker down, one can dig in, one can disperse to try to ride out such a single-dimension attack. ... Such strategies are designed to hope to win, they are not designed to win."—Gen. Colin Powell, testimony to Senate Armed Services Committee, Dec. 4, 1990.

Careful Aim
"Oddly, it seemed, there was no Second World War-style urban destruction, despite the tons of explosives that had fallen. Instead, with meticulous care—one might almost call it artistry—American aircraft had taken out telecommunications facilities, transportation links, key government offices, and most painful of all, electric generating plants."—Milton Viorst, The New Yorker, June 24, 1991.

From the Far Side

- "The recent air campaign against Iraqi forces gained not a single one of the US or UN objectives in the Persian Gulf War. Four days of land combat—aided immeasurably by the air campaign—achieved every goal and victory."—Gen. Frederick J. Kroesen, former commander of US Army Europe, letter to Washington Post, printed Nov. 7, 1994.

- "As the leading element of the [Gulf War] Coalition, the United States Army decisively defeated the fourth largest field army in the world. ... It was the land force that provided the essential muscle to lead America's Coalition partners in the liberation of Kuwait, the decisive defeat of the Iraqi army, and the restoration of stability in the Persian Gulf."—Association of the US Army, February 2001 white paper.

- “The strategic air offensive made little difference to the outcome of the war and almost certainly failed in its objectives.”—Norman Friedman, Desert Victory: The War for Kuwait, US Naval Institute, 1991.

Tarawa
"This is going to be another Tarawa. You are going right into their teeth."

No Ground Option
Shaping and Preparing the Battlefield
“Air support related issues continue to plague final preparation for offensive operations and raise doubts concerning our ability to effectively shape the battlefield prior to initiation of the ground campaign. ... Army nominated targets are not being serviced.”

Risks and Vital Interests
“We throw around the word ‘vital’ very carelessly. When politicians declare an interest to be vital, our men and women in uniform are expected to put their lives at risk to defend that interest. I believe that the risks associated with continued emphasis on sanctions are considerably less than the very real risk associated with war.”

In a Word
“The air campaign was decisive.” —Defense Secretary Dick Cheney, NBC’s “Meet the Press,” April 14, 1991.

Ignore Them
“You may have inquiries or advice directly from the Air Staff. Ignore them if you want to. If I need to know or say anything, I’ll go to the Joint Chiefs of Staff, the JCS will go to CENTCOM, and CENTCOM will pass it on to you.” —Gen. Merrill A. McPeak, Air Force Chief of Staff, to Lt. Gen. Charles Horner, Joint Forces Air Component Commander, from Horner interview, May 30, 1991, for "Airpower in the Gulf," 1992.

War and Politicians

Marines in Support?
“The mission was to conduct a supporting attack and that just drove some Marines crazy. They would say, ‘We got to be in the main attack. We can’t be in the supporting attack.’” —Lt. Gen. Walter E. Boomer, Marine forces component commander, March 1991.

Peace Would Be Better
“Hardening positions make a peaceful resolution of the Persian Gulf crisis ever less likely. How can we make the best of this situation and heal the fractured region when the crisis is over?” —Former President Jimmy Carter, “The Need to Negotiate,” Time Magazine, Oct. 22, 1990.

Don’t Worry About It
“We are not preparing the battlefield; we are destroying it.” —Lt. Col. David A. Deptula, director of planning in the Black Hole, on a sign he put up Jan. 29, 1991, quoted in Storm Over Iraq, Air Power and the Gulf War, 1992.

Reformers Were Wrong
“Basically, high technology was vindicated in Desert Storm. There was a school that argued that the US was going in for too much high tech in its military equipment. ... My view is that Desert Storm proved the worst fears of this school to be unfounded.” —Rep. Les Aspin (D-Wis.), chairman of the House Armed Services Committee, June 1991.

Off With Its Head
“Our strategy to go after this army is very, very simple. First we are going to cut it off. And then we are going to kill it.” —Gen. Colin Powell, Pentagon press briefing, Jan. 23, 1991.

Unafraid of Airpower

A Real Mother
“Prepare for war with the United States. Let everybody understand that this battle will become the mother of all battles.” —Saddam Hussein, September 1990.

First in History
“It was ... the first war in history in which airpower, not ground forces, played the dominant role.”

Lesson Number One

Off With Its Head
“Our strategy to go after this army is very, very simple. First we are going to cut it off. And then we are going to kill it.” —Gen. Colin Powell, Pentagon press briefing, Jan. 23, 1991.

The Main Man
“I thank God Schwarzkopf was in charge in the Gulf, because there was no wondering about which service doctrine was going to prevail. There no component would dominate the planning. This was not Vietnam, where the Pentagon warriors dictated targets, tactics, and procedures. We were a team with one vision of what needed to be done.” —Horner, Every Man a Tiger, 1999.
Shortly after 3 a.m. local time on Jan. 17, 1991, the Gulf War began. Operation Desert Shield gave way to Operation Desert Storm. Hundreds of coalition aircraft streamed through the night, including a task force that blew open a hole in the Iraqi air defenses: At 2:20 a.m., 50 minutes before H-Hour, US Army AH-64 Apache gunships with USAF MH-53J Pave Low special operations helicopters acting as pathfinders destroyed two early warning radar sites. USAF F-117s crossed the border to knock out a key interceptor operations center.

As H-Hour approached, air boss Horner’s staff at the command post in Riyadh, Saudi Arabia, watched the CNN telecast live from Baghdad. When CNN went off the air in midsentence, they knew that an F-117 had struck the Iraqi International Telecommunications Center with a 2,000-pound laser guided bomb. Minutes later, the lights went out in Baghdad and did not come on again until the ceasefire.

At H-Hour plus six minutes, the first of 53 US Navy cruise missiles hit Baghdad. Close behind them came air launched cruise missiles delivered by USAF B-52s. That first night, 669 coalition aircraft, 530 of them from the US Air Force, took part in the attack. By sunrise, Saddam Hussein had lost control of his forces, and Iraq was well on the way toward losing the war. In the first 24 hours, the coalition flew 2,775 sorties. The F-117, combining stealth and precision, hit 31 percent of the targets the first day.

For the first time in a major armed conflict, the entire enemy target base was struck simultaneously from the beginning rather than in gradual increments. Coalition airpower went after Iraqi air forces and airfields, command and control centers, radar sites, key military infrastructure, and Iraqi ground forces.

On the evening of Jan. 17—confident that Iraqi surveillance would not detect his actions—Schwarzkopf began a “Left Hook” redeployment of his ground forces to the west, putting them into position to turn the Iraqi right flank in a classic military envelopment when the ground war began.
The first aircraft to launch against Iraq—because they had the longest distance to go—were seven B-52Gs from the 2nd Bomb Wing at Barksdale AFB, La. They took off at 6:35 a.m. EST on Jan. 16, nearly 12 hours before H-Hour. It was the longest combat mission in history. Each of the B-52s would be refueled in the air four times and fly more than 14,000 miles and 35 hours before returning to land at their home base at Barksdale.

The Pentagon waited for a full year to reveal this mission publicly. The B-52s were carrying a secret weapon: the AGM-86C Conventional Air Launched Cruise Missile. It was a new capability that the Department of Defense was not eager to disclose. The CALCM replaced the nuclear warhead of the AGM-86B ALCM with a 1,000-pound blast fragmentation warhead and GPS satellite-based navigation for greater accuracy. However, the first cruise missiles to strike Baghdad, shortly after H-Hour, were US Navy Tomahawk land attack missiles, or TLAMs, launched by the cruisers and battleships in the Red Sea and the Persian Gulf.

Ninety minutes after H-Hour, the B-52s launched their CALC-Ms from outside the Iraqi air defense network against high-priority targets. Of the 35 missiles fired, 31 hit their targets, better than 88 percent accuracy for the new weapon in its first combat test.

Later that night, about 4 a.m., B-52s based at Diego Garcia in the Indian Ocean, flew low-level strikes with iron bombs against airfields in Iraq. The long mission from Barksdale was a one-time event, but the Diego Garcia B-52s and others from Moron AB, Spain, the United Kingdom, and Jiddah in southern Saudi Arabia played a continuing role. They flew 1,624 missions and delivered 38 percent of all the bombs dropped by the Air Force in the Gulf War. As they had in Vietnam, the B-52s had a tremendous psychological effect on the enemy ground forces. Between 20 and 40 percent of Iraqi deserters said they were influenced in their decisions to run by fear of B-52 attacks.
PreCision AttACk

Desert Storm marked the first extensive use of precision guided munitions in warfare. This was mainly the doing of the US Air Force, which dropped 90 percent of the PGMs. Of 17,000 PGMs expended in the Gulf War, 9,342 were laser guided bombs. The others included 5,448 air to surface missiles (mostly Mavericks); 2,039 anti-radiation missiles (mostly high-speed anti-radiation missiles); and 333 cruise missiles.

The most spectacular combination was the stealthy F-117 and its principal weapon, the 2,000-pound GBU-27 laser guided bomb. The F-117 had made a brief appearance in Operation Just Cause in Panama in 1989, but the Gulf War was its real debut. Its forward-looking infrared targeting system was so good that orders specified a particular part of a building—a corner, a vent, a door—to be hit. The first night, an F-117 rolled in on Iraqi air force headquarters at Al Muthanna airfield in Baghdad, put a smart bomb neatly down the airshaft, and blew out the sides of the building. Millions of people watched it happen on television. Because of its stealth characteristics, the F-117 was able to operate in the most hazardous airspace, even before air supremacy was established and could, with less risk than other aircraft, maintain laser lock on the target while the GBU-27 homed in.

Another PGM star was the F-111F, credited with destroying more than 1,000 tanks and armored vehicles with the 500-pound GBU-12 LGB and the Pave Tack infrared targeting pod. When Iraq began dumping Kuwaiti oil into the Gulf, the oil-pumping manifold was knocked out by F-11Fs from 20 miles away, using GBU-15 electro-optical glide bombs. The F-15E also gained the ability to deliver PGMs when LANTIRN navigation and targeting pods were installed less than a month before the war started.

Precision guided munitions brought on a great leap in targeting accuracy. In World War II, the circular error probable—the standard measure of accuracy—for a B-17 bomber was 3,300 feet. For an F-117 with a laser guided bomb in the Gulf, it was 10 feet.
Air Supremacy

The Iraqi Air Force never really got off the ground after the first day of the battle, when it took heavy losses. It tried to ride out the war in hardened shelters, but coalition aircraft began attacking Iraqis in their bunkers. Soon the Iraqi Air Force “flushed” to Iran and ceased to be a factor.

Air supremacy—which Schwarzkopf declared on Jan. 27—required not only the defeat of Iraqi warplanes but also destruction or neutralization of the French-built Kari (Iraq spelled backwards in French) integrated air defense system, the surface-to-air missiles and anti-aircraft artillery, and the Iraqi air bases. In the early rounds, the coalition lost nine aircraft to AAA and 23 to SAMs. Iraqi radar activity and shooting by the AAA and SAMs dropped abruptly after the first day as F-4G Wild Weasels attacked and destroyed the radar sites guiding the fire.

The air battle, such as it was, was a one-sided affair. The coalition shot down 35 fixed wing aircraft—USAF accounted for 31 of them—and five helicopters. F-15s were responsible for every USAF fixed wing aircraft destruction; the AIM-7 missile was the weapon in 23 of the shootdowns; 16 of the shootdowns were from beyond visual range, guided by the E-3 Airborne Warning and Control System aircraft. It was a stunning repudiation of the prewar claims of the military “Reform” movement which disparaged the F-15 and the AIM-7 and said that BVR engagements were unlikely to happen.

The coalition had no air-to-air losses. Part way through the war, some of the fighters, including the Saudi F-15s and the Canadian CF-18s, switched to dropping bombs. Iraq, which began the war with 724 aircraft, had 316 left when it ended.

The most unusual shootdown, not credited in some counts, was by an F-15E that destroyed a Hind helicopter with a laser guided bomb. Before engaging the Hind with an AIM-9 missile, the F-15 launched an LGB against enemy troops on the ground. The Hind rose up into the path of the 2,000-pound bomb with devastating results.
Never before in warfare had one combatant so much information about the forces and activities of the other. The Iraqi military was not able to do anything in secret. E-3 Airborne Warning and Control System aircraft, flown by the United States and Saudi Arabia, tracked everything that moved in the air. The E-8 Joint STARS (surveillance target attack radar system) tracked everything moving on the ground. RC-135 Rivet Joint picked up the signals from electronic emitters. TR-1/U-2 and RF-4C aircraft conducted visual reconnaissance. Attack aircraft with infrared targeting pods scanned the desert for heat signatures from tanks at night. Defense Support Program satellites provided warning data on Scud B missile launch plumes within two minutes of launch.

E-3s flew along the border, three at a time, maintaining continuous coverage of the air picture from the Red Sea to the Persian Gulf throughout the war. The pulse doppler radar, housed in the rotating dome atop the E-3, spotted enemy aircraft hundreds of miles away. The RC-135 signals intelligence aircraft helped identify the aircraft seen by the E-3. All of this translated into a composite picture displayed on a large screen in the Coalition Tactical Air Control Center.

Similarly, radar in the Joint STARS aircraft found anything that moved on the ground. Joint STARS was still in development, but two aircraft were pressed into service and flew every night of the war.

Meanwhile, Saddam Hussein was left without information about his own forces and knew nothing of coalition operations. Air attacks concentrated on 78 command and control nodes whose elimination would paralyze Iraq. Twenty-eight minutes after the war began, Iraqi units were shut off from higher echelons, with no intelligence or direction. Schwarzkopf was free to begin his massive shift of ground forces to the west for his Left Hook attack without concern the movement would be detected. The Iraqi communications infrastructure was also destroyed. Two weeks into the war, Saddam was reduced to sending orders from Baghdad to Kuwait by messenger, a trip that took at least 48 hours under the prevailing conditions.
When US forces deployed to the Gulf, they had to bring their support with them or import it from the United States or bases in Europe. By any standard, the results were extraordinary.

In one instance, Air Force civil engineers built a base from the ground up in 40 days. When they arrived, the tallest things standing had been two-inch-high taxiway lights. The first of 15 air transportable hospitals arrived in theater the first week of Desert Shield and was ready to receive patients in 24 hours. Even the Army and Air Force Exchange Service was there, operating out of tents to provide snack food, T-shirts, toothpaste, and soda. Troops who could not get to the tents in person could order electronically with their laptop computers.

At the peak of operations, a strategic airlifter was landing every 11 minutes. In addition, Military Airlift Command had about 150 C-130 tactical transports—almost a third of the fleet—in the theater. Their sortie rate during the war ranked second only to that of interdiction fighters. Intratheater C-130 “Camel” missions handled cargo and “Star” missions carried passengers. Nine thousand Air Force ground vehicles were in operation when the war began.

Support forces, working under wartime conditions, often exceeded peacetime performance standards. For example, ground crews turned F-15s around for their next mission in 17 minutes. Standard for a “hot pit” turn was 20-25 minutes. Mission capable rates across the board were higher than in peacetime.

Back in the United States, Air Force Logistics Command accelerated operations and rebuilt engines in 20 to 60 days, faster than in peacetime. Expedited repair and overhaul of aircraft gave the force 931 days of additional flying service during the conflict. At Langley AFB, Va., a “CENTAF Rear” command and control center coordinated stateside support for forces in the Gulf.

Air Force Space Command repositioned a Defense Satellite Communications System II satellite from over the Pacific to a new geostationary orbit 22,300 miles above the Indian Ocean. At the peak of hostilities, military satellites were handling about 85 percent of the communications for the force.
Two weeks into the war, Iraq was reeling from the constant air attacks and wanted to induce a fight on the ground. To provoke such an exchange, Iraqi armored divisions moved against the lightly defended border town of Khafji in Saudi Arabia. Their hope, apparently, was to lure coalition ground forces back into the strength of the Iraqi defenses.

Khafji is on the Gulf coast, 6 miles south of the Kuwaiti border. At 9:30 p.m. on Jan. 29, a Joint STARS surveillance aircraft using its moving target indicator and side-looking radar to search deep, detected an armored assembly area and an attack in the making. More than 60 vehicles were moving through the night toward Saudi Arabia. Schwarzkopf had no intention of letting himself be lulled into a general ground engagement. However, it was essential to stop the Iraqi advance and expel the invasion force from Saudi Arabia. CENTCOM’s initial response was to scramble two A-10s and an AC-130 gunship. Together, they destroyed 58 of the 71 oncoming vehicles.

On Jan. 29, three Iraqi mechanized brigades reached Khafji, where they tangled with US marines and Saudi National Guardsmen, supported by airpower and coalition tanks. A few hundred Iraqi troops occupied Khafji briefly but the offensive soon collapsed.

Coalition fighter aircraft, cued by the Joint STARS’ scan for moving vehicles, hammered the invaders and harried them relentlessly on the way out. B-52s contributed their firepower as well. On Jan. 31, coalition aircraft routed two Iraqi divisions assembling north of Khafji for the attack. One tank brigade, caught in the open, was practically destroyed from the air. A survivor said that all the brigade had endured during the 10 years of the Iran-Iraq war did not equal what happened to it in 15 minutes in the desert north of Khafji. It was Saddam Hussein’s first and last attempt to take the offensive.

At Khafji, airpower defeated moving enemy armored forces at night, on short notice. That was contrary to the prediction of a CENTCOM exercise the previous summer that airpower would not be very effective against Iraqi armored formations.
Desert Storm was the first war since the adoption in the 1970s of the Total Force policy, which made the services far more dependent than previously on the National Guard and the Reserves. In the intervening years, the Air Force had allocated many resources and responsibilities to its Guard and Reserve components.

Military Airlift Command had about half of its airlift flight crews in the Guard and Reserve. Other Air Force concentrations in those components included tactical airlift, air refueling squadrons, aeromedical evacuation, communications, security police, and civil engineers.

When the crisis broke in the Gulf, Air Force called for volunteers. In the next 72 hours, 15,000 Guardsmen and Reservists stepped forward. On Aug. 8, the first airplane into Saudi Arabia was an active duty C-141 flown by an Air Force Reserve crew. By the end of August, the Guard and Reserve were flying 42 percent of the strategic airlift missions and 33 percent of the aerial refueling.

In late August, the largest mobilization of Guard and Reserve forces since World War II began. Eventually, 231,000 members from all services were called up and 116,000 served in the Kuwait theater of operations.

The Air Guard and Reserve accounted for 17 percent of USAF’s deployed wartime force, not counting many reservists who remained in the US. Some 30,000 members of the Air National Guard and Air Force Reserve handled a wide variety of critical missions at one time or another during Desert Shield and Desert Storm.

Many of those who served, especially in flying units, were seasoned veterans with years of valuable experience. Most of the flight crews called up were airlift and tanker crews, but several fighter units were mobilized as well. Among them was the 169th Tactical Fighter Group from South Carolina, a Guard F-16 unit that had won the Gunsmoke fighter competition in 1989. On Feb. 6, 1991, an Air Force Reserve pilot, Capt Robert Swain, achieved the first-ever A-10 air-to-air victory, shooting down an Iraqi helicopter with a long burst from his 30 mm anti-tank cannon, which obliterated the helicopter.
Around the clock, USAF-led coalition air forces pounded Iraqi armor, artillery, infantry vehicles, the Republican Guard, logistics installations, command posts, and command-and-control facilities. Before the ground battle began on Feb. 24, casualties and desertions had reduced Iraqi troop strength by at least half. F-111Fs and F-15Es, using laser guided bombs, made smoking ruins of Iraqi tanks, as did F-16s and A-10s using Maverick missiles.

In the first 38 days, airpower destroyed 39 percent of the Iraqi tanks, 32 percent of the armored personnel carriers, and 47 percent of the artillery. In the aggregate, airpower met the goal of 50 percent attrition of Saddam’s ground force. Between 50 and 75 percent of the two Iraqi front echelons in Kuwait were either casualties or taken prisoner, although the attrition was lower for the Republican Guard divisions. At the beginning of the war, there were 54 railroad and highway bridges in Iraq, most of them running southeast from Baghdad into Basra and Kuwait. At the end of the war, 41 of them had been dropped. Thirty-two pontoon bridges hastily put up as replacements were destroyed as well.

Attack on surface forces accounted for 56.3 percent of coalition sorties. “Tank plinking”—picking off individual tanks from medium altitude at night with precision weapons—began in February, with most of the missions flown by F-111Fs, F-15Es, and A-6s. The workhorse of the air campaign was the F-16, which flew almost 13,500 sorties, the highest sortie total of any system in the war. One squadron of F-16s equipped with the LANTIRN attack system, delivered Maverick PGMs, but the F-16 did not have laser designation capability and (according to USAF) flew primarily as a “dumb bomb dropper.” A-10s operated mostly along the border, attacking the Iraqi Army in the front lines. F-117s, F-111s, and F-15Es flew mainly by night and the F-16s and A-10s mainly by day.

The air campaign was devastating, but Army officials regarded it as preliminary to the ground attack. To others, it looked more like the main event.
Airpower could have ground the Iraqi force down further, but pressure had built to launch the ground phase of the war. H-Hour for the ground offensive was 4 a.m., local time, on Feb. 24. Coalition ground forces struck powerfully, especially on the western flank in the Iraqi desert. Air strikes continued. Within a day, the Iraqis were in general retreat.

Following their instructions from Schwarzkopf, though, soldiers and airmen continued to destroy as many enemy tanks as possible so they could not be used in some future conflict. In a 45-minute battle on Feb. 27, the day before the cease-fire, US armor struck a Republican Guard division at Medina Ridge and destroyed 60 Iraqi T72 tanks. The outcome of the war was not in doubt, and the White House and the Pentagon were getting nervous about news reports of a “Turkey Shoot” on the “Highway of Death” leading out of Kuwait.

US forces could have completed the destruction, but the coalition had formed to liberate Kuwait, not for regime change in Iraq, and the United States was not prepared to continue the war alone.

The cease-fire was at 8 a.m. local time Feb. 28. The epic clash of land armies, anticipated by the Pentagon in December, did not happen. The ground operation had lasted only four days and four hours. Casualties for Desert Storm had not reached the level of 45,000 predicted by some. The total for US forces was 148 dead and 467 wounded. The coalition allies had 99 dead, 434 wounded.

The fighting was barely ended before some Army partisans circled the propaganda wagons and insisted that it was the final 100 hours in the Gulf that were decisive—not the 38-day air campaign that brought Iraq to its knees. The air effort, they said, was merely an “operation,” not a “campaign.” However, President George H. W. Bush got it right. “Gulf lesson one is the value of airpower,” he said on May 29. “It was right on target from Day One. The Gulf War taught us that we must retain combat superiority in the skies.”
N ever before had the public gotten so much information so promptly about a war in progress. It should have marked a new high in cooperation between the military and the news media. Radio and television carried the briefings from Riyadh and the Pentagon, and an enormous amount of detail on sorties, targets, and results was made available to reporters. The public was never in the dark except for security reasons.

More than 1,400 reporters and other news media representatives registered with joint information bureaus in Dhahran and Riyadh, representing US and international press. Hundreds more covered the war from Washington. When the ground war began, 142 pool reporters accompanied ground forces in Kuwait, Iraq, and Saudi Arabia. By comparison, only 461 reporters signed up with Supreme Headquarters Allied Powers Europe (SHAPE) to cover D-Day in 1944, and only 27 of them went ashore with the first wave.

Much of the coverage of Desert Storm was good, and some of it was outstanding. When reporters stuck to covering the news, they did a good job of it. However, the actions and attitudes of a substantial number of reporters and editors led to an all-time low in the military-media relationship.

Sometimes the behavior of reporters, especially those from radio and television, defied belief. One reporter at a press conference asked for a description of the recognition markings on Coalition vehicles that told aircrews that these were not targets. NPR complained that reports of aircraft shot down were delayed to give search and rescue a chance to work and allow the fliers an opportunity to evade and escape before American TV alerted the Iraqis to go looking for them. There were also complaints about the security imposed on the redeployment of ground forces for the “Left Hook.” Some reporters believed the decision on whether to report the redeployment in progress should be left up to them and their editors. Post-war discussions indicate many reporters would have reported, had they been able to do so, that the Americans were moving into position for a surprise flanking attack. Some of the questions were simply dumb. When will the war end? Why do some of the bombs miss their targets? Why haven’t you destroyed all of the Scuds?

“The Persian Gulf press briefings are making reporters look like fools, nit-pickers, and egomaniacs,” wrote Washington Post columnist Henry Allen, who denounced the “dinner party commandos, slouching inquisitors, [and] college spitball artists” as “a whining, self-righteous, upper-middle-class mob.” He added, in his Feb. 21, 1991, column: “They talk about war as if it were a matter to be hashed out with a psychotherapist or a matter of ethics to be discussed in a philosophy seminar. A lot of them seem to care more about Iraqi deaths than American deaths; and after the big oil spill in the Gulf, they seemed to care more about animals than people.”

However, veteran reporter Walter Cronkite, writing in Newsweek, Feb 25, 1991, charged, “The US military in Saudi Arabia is trampling on the American people’s right to know.” He added that the public siding with the military on this “can only be because the press has failed to make clear the public’s stake in the matter.” Actually, the public may have understood it better than Cronkite did. According to the polls, the public thought the reporters had all the information they needed to report the war.

David Lamb of the Los Angeles Times came close to spilling the beans when he complained, as quoted by Editor & Publisher, that “pool reporting tends to dilute individual creativity.” The road to glory and airtime is not paved with the ordinary facts unless one has them before the other reporters do. The unhappy reporters wanted scoops and exclusives. They wanted to command the spotlight and become media stars.

Valid instances of excessive censorship were hard to find. As of Feb. 20, 1991, more than 820 pool reports had been written. Of those, only five blocked reports were submitted for review in Washington. Of these, four were quickly cleared and a fifth appeal was withdrawn when the reporter’s editor in chief agreed with the Pentagon that the story should be modified because it revealed details of sensitive intelligence procedures.
US and Coalition force structure in the Gulf War was an ever-changing array. The number of aircraft in action varied by date, by what was included in the count, and as airplanes came and went from the theater. Thus the charts that follow have different bottom-line and force category totals. However, each of them in its own way presents an important aspect of the force that fought the war.

### Coalition Air Strength on the Eve of War

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<th>Airlift</th>
<th>Other</th>
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### The USAF Combination

- **Support Aircraft**
- **Other Combat Aircraft**
- **Fighters**

![Graph showing the USAF combination of aircraft over time](image-url)
### Combat Aircraft of the Coalition

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<th>Type</th>
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<tr>
<td>Italy</td>
<td>8</td>
</tr>
<tr>
<td>Kuwait</td>
<td>35</td>
</tr>
<tr>
<td>Netherlands</td>
<td>18 (to Turkey)</td>
</tr>
<tr>
<td>Oman</td>
<td>50</td>
</tr>
<tr>
<td>Qatar</td>
<td>19</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>48</td>
</tr>
<tr>
<td>UAE</td>
<td>78</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total US Combat Aircraft</strong></td>
<td><strong>1,193</strong></td>
</tr>
</tbody>
</table>

---

### US Air Order of Battle: Fighter, Attack, Bomber Aircraft

**As of Feb. 1, 1991**

<table>
<thead>
<tr>
<th>Service</th>
<th>Aircraft</th>
<th>Type</th>
<th>Number</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>USAF</td>
<td>F-15</td>
<td>Fighter</td>
<td>96</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F-16</td>
<td>Fighter/attack</td>
<td>212</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F-4G</td>
<td>Fighter/attack</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A-10</td>
<td>Attack</td>
<td>144</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AC-130</td>
<td>Attack</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F-15E</td>
<td>Fighter/bomber</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F-111F</td>
<td>Fighter/bomber</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F-117A</td>
<td>Fighter/bomber</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B-52</td>
<td>Bomber</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td><strong>Total USAF</strong></td>
<td><strong>693</strong></td>
<td><strong>58%</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Navy    | F-14     | Fighter        | 109    |       |
|         | F/A-18   | Fighter/attack | 89     |       |
|         | A-7E     | Fighter/attack | 24     |       |
|         | A-6E     | Fighter/bomber | 96     |       |
| **Total Navy**                    | **318** | **27%**       |

| USMC    | F/A-18   | Fighter/attack | 78     |       |
|         | AV-8B    | Attack         | 84     |       |
|         | A-6      | Fighter/bomber | 20     |       |
| **Total USMC**                     | **182** | **15%**       |

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Lt. Gen. Chuck Horner briefs news media. (DOD photo/TSGt. Fernando Serna)
Sorties Flown

- US Navy 18%
- USMC 11%
- Allies 14%
- USAF 57%
- US Navy 18%

Total Munitions Dropped

- USAF 72%
- USMC 15%
- US Navy 13%

US Active Duty Troops Deployed to Gulf

- Army 53%
- Navy 21%
- USMC 15%
- USAF 11%

Active, Guard, Reserve Forces Deployed to Gulf

- Active Duty USAF 83%
- Air National Guard 6.2%
- Air Force Reserve 5.8%
- Individual Ready Reserve 0.3%
- Other Reserves 4.6%

Dividing Up Strategic Airlift
Percent of Missions

- C-141 53%
- C-5 24%
- KC-10 2%
- C-17 21%
The Destruction of Iraqi Airpower

| Iraqi Fixed-Wing Inventory as of Jan. 10, 1991 | 724 |
| Iraqi Aircraft Lost or Destroyed by Feb. 28, 1991 | 408 |
| Shot down | 33 |
| Destroyed in the open | 113 |
| Destroyed in shelters/bunkers | 141 |
| Fled to Iran | 121 |
| Iraqi Fixed-Wing Aircraft Left at War’s End | 316 |

Coalition Air Strikes by Target Categories

<table>
<thead>
<tr>
<th>Strikes</th>
<th>Percent of Total</th>
<th>Target Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>23,430</td>
<td>66.8</td>
<td>Iraqi ground forces</td>
</tr>
<tr>
<td>2,990</td>
<td>8.5</td>
<td>Airfields</td>
</tr>
<tr>
<td>1,460</td>
<td>4.2</td>
<td>Scuds</td>
</tr>
<tr>
<td>1,370</td>
<td>3.9</td>
<td>SAMs</td>
</tr>
<tr>
<td>1,170</td>
<td>3.3</td>
<td>Lines of communication</td>
</tr>
<tr>
<td>970</td>
<td>2.8</td>
<td>Military industry</td>
</tr>
<tr>
<td>970</td>
<td>2.8</td>
<td>Nuclear/biological/chemical sites</td>
</tr>
<tr>
<td>630</td>
<td>1.8</td>
<td>Kari integrated air defense system</td>
</tr>
<tr>
<td>580</td>
<td>1.7</td>
<td>Telecommunications, C³</td>
</tr>
<tr>
<td>540</td>
<td>1.5</td>
<td>Oil</td>
</tr>
<tr>
<td>370</td>
<td>1.0</td>
<td>Naval targets</td>
</tr>
<tr>
<td>345</td>
<td>1.0</td>
<td>Electric power</td>
</tr>
<tr>
<td>260</td>
<td>0.7</td>
<td>Iraqi leadership</td>
</tr>
<tr>
<td>35,085</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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