

ARMIES OF THE GULF WAR



GORDON ROTTMAN RON VOLSTAD

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ARMIES OF THE GULF WAR 1990-91

INTRODUCTION

'The easier an accomplishment appears to have been, the harder it was to achieve.' (*Anthony J. Serra in a letter to Times Magazine*)

War is a national undertaking which must be co-ordinated from the highest levels of policy-making to the basic levels of execution. Military strategy, operational art, and tactics are the broad divisions of activity in preparing for and conducting war. Successful strategy achieves national and alliance political aims at the lowest cost in lives and treasure. Operational art translates those aims into effective military operations and campaigns. Sound tactics win the battles and engagements which produce successful campaigns and operations.

If the above description of the structure of modern warfare seems to have been written to describe the Gulf War, it was. However, it appeared in the 1986 edition of FM 100-5, *Operations*, the US Army's keystone war-fighting manual describing the AirLand Battle concept. The 1990-91 war was fought exactly as specified by the US Army's AirLand Battle doctrine. There can be little argument that no previous military operation of anywhere near the scale of Operations DESERT SHIELD and DESERT STORM has ever come close to achieving the degree of success that coalition forces achieved between August 1990 and February 1991. Granted, there were problems — that is the nature of the business; but overall, it was executed just as the planners intended.

Dozens of books have been, and no doubt more will be written on the execution of the greatest military deployment and logistical effort since World War II, followed by the most rapid and decisive victory of its scale¹. This book will not concentrate on the 100-hour ground war, but will focus on the structure, equipment, effectiveness, and employment of the 680,000 coalition troops which fought that battle.

At the time of this writing complete and official orders of battle of the coalition forces have not been released by any of the participants. The deployed units and their subordination described in this work were compiled from a wide variety of often conflicting sources. Any errors are the fault of the author's research and not the contributors.

¹ See Desert Storm Specials Campaign, 1 *Land Power*, 2 *Air Power* and 3 *Sea Power*.

Abbreviations used:

Units:

Det.....Detachment	Sdn.....Squadron
Co.....Company	Bde.....Brigade
Bty.....Battery	Gp.....Group
Trp.....Troop	Regt....Regiment
Bn.....Battalion	Div.....Division

Branches/Misc.:

Abn.....Airborne	Mech...Mechanized
ACR....Armored Cavalry Regt.	MI.....Military Intelligence
ADA....Air Defense Artillery	MP.....Military Police
AFB....Air Force Base	Psyop...Psychological operations
Armd...Armored	RAF...Royal Air Force
ARNG..Army National Guard	Recce...Reconnaissance (UK)
Arty...Artillery	Recon..Reconnaissance
Avn....Aviation	RG.....Republican Guard
CA.....Civil Affairs	RSLF..Royal Saudi Land Force
Engr...Engineer	SEAL..SEa-Air-Land
FA.....Field Artillery	SF.....Special Forces
HQ.....Headquarters	Spt.....Support
Inf.....Infantry	USAR..US Army Reserve
	USMC..US Marine Corps

Weapons/Vehicles

APC.....Armored Personnel Carrier
ATGM....Anti-Tank Guided Missile
GL.....Grenade Launcher
HMMWV..High Mobility Multi-Wheeled Vehicle
ICV.....Infantry Combat Vehicle
IFV.....Infantry Fighting Vehicle
ITV.....Improved TOW Vehicle
LAV.....Light Armored Vehicle
LAW.....Light Antitank Weapon
MCV.....Mech. Combat Vehicle
MG.....Machine Gun
MLRS....Multiple Launch Rocket System
MRL.....Multiple Rocket Launcher
SP.....Self Propelled

Notes on designation practices

(1) US Army troops and batteries are company-size; squadrons are battalion-size; detachments are generally platoon or smaller size, but function administratively as a company.

(2) Designation practices vary widely among the different coalition forces, but most of these are based on British practices. Designation practices unique to specific forces will be explained in the text. In most cases armour (tank) and cavalry (recon.) regiments are of battalion size, as are artillery, engineer, and other regiments; squadrons are company-size and troops are platoon-size. In the French forces, all battalion-size units are designated regiments.

US FORCES

The US decision to commit forces in the defence of Saudi Arabia, when formally requested by King Fah'd on 6 August 1990, was immediate, with the first units of the 82d Abn. Div. arriving two days later and elements of the Marines landing on the 14th. On 22 August President Bush signed an order allowing the call-up of 200,000 reserves. Besides continuing a long history of world-wide peacekeeping, the commitment of US troops to the Gulf served a purpose that may become a key topic of study by historians long after the air and ground wars have been analyzed and dissected; quite simply, it reunified the country and restored a national pride lost in the aftermath of Vietnam. It also proved that the US armed forces were again the most capable military force in the world. As Margaret Thatcher said, 'There is only one superpower and that's the United States.'

Major Commands

The US armed forces possess five major unified commands to co-ordinate deployed forces in specific regions. The Middle East, or Southwest Area, is the responsibility of US Central Command (USCENTCOM or simply CENTCOM). The US had long prepared for military intervention in the command's troubled region. Its area of responsibility covers Iraq, Iran, the Arabian Peninsula with Saudi Arabia, Kuwait and other small oil-rich states. Across the Red Sea are Egypt, Sudan, and the civil war-

Loaded on flat cars, 203mm M110A2 SP howitzers, 6-ton M548 ammunition carriers, and 2-ton M10 ammunition trailers, already painted desert sand, of the 142d FA Bde. await movement to a seaport. (Author's collection)

Typical US base camp accommodations: a small general purpose tent ('GP small' or 'hex tent'), surrounded by a low protective sandbag wall. A diesel-burning stove provides heat. Hundreds of locally contracted tents were also purchased to quarter troops. (Steve Capps)

and famine-torn countries of the Horn of Africa, Ethiopia and Somalia. To the northeast are Pakistan and Afghanistan; but Israel, Lebanon and Syria are not in the command's charter. The command's concerns have long centered on the Persian Gulf and Iraq, long expected to be the tinder forcing any eventual US intervention in the region. The Persian Gulf is the fulcrum of the Middle East, with over one-third of the world's oil reserves lying under it or its adjacent shores. Through the Straits of Hormuz, the Gulf's mouth, almost 30% of the free world's oil consumption passes, making it the single most important 'choke point' in the world.

USCENTCOM, with a joint planning staff of just over 1,000 personnel headquartered at MacDill AFB, Fla., is a unified command responsible for overseeing and co-ordinating each armed service's components tabbed for commitment to the region. In actuality, prior to DESERT SHIELD, CENTCOM had no assigned units of its own; it had to assemble its massive joint forces from the ground up and from halfway around the world. Southwest Asia is not necessarily the only mission assigned to many of these forces; they may also be designated and trained to support contingency operations under other unified commands. Additionally, other units, assigned different missions, may be assigned to any of the commands. This flexibility ensures that a contingency force can be tailored for the best possible mix of units required to meet the enemy, terrain,



weather, and even political situation. Current unit readiness, type of equipment, and proximity to the trouble spot also effects the selection of forces — all aptly demonstrated by the units committed to DESERT STORM.

CENTCOM had its origins in 1979 as the Rapid Deployment Joint Task Force (RDJTF) when Iran became a major problem in the region and was redesignated USCENTCOM in 1982. CENTCOM's Army component is provided by Third US Army, headquartered at Ft McPherson, Ga.; its key operational force is XVIII Abn. Corps, Ft Bragg, N.C. The III Corps at Ft Hood, Tex., an armour-heavy force with the principal mission of forming NATO's reinforcement corps, was also tabbed to support Third US Army for possible Southwest Asia contingency missions. The USAF's contribution is the Seventh Air Force and elements of other commands; while the Navy's Seventh Fleet in the Western Pacific and elements of the Atlantic-oriented Second Fleet both maintain elements in the Indian Ocean and Gulf region.

It is well known that the US opposed a United Nations military command. The reason was simple: CENTCOM was an organized and functional command, already on the ground, and equably sharing joint command of coalition forces with the Saudis. There was no reason to inject more complexities by adding an *ad hoc* command to oversee operations by 'committee'.

Desert Training

One of the lay media's major errors, of many they made during the war's course, was the accusation that the US armed forces were ill prepared and equipped for desert warfare, having concentrated 'only' on Europe for so long. Nothing could be further from the truth. Most of the Active Army's roughly 45 heavy maneuver units (mechanized infantry and tank battalions, armored cavalry squadrons) in the States rotate about once every 18 months through the National Training Center (NTC) at Ft Irwin, Calif. In the middle of the harsh Mojave Desert, its summer and winter conditions are not unlike those encountered in Saudi Arabia. This gives commanders and staffs, during their assignment to a given unit, at least one exercise against the NTC's unco-operative 'enemy' equipped with Soviet weapons and vehicles, in a high threat desert environment (and as it turned out, the NTC 'enemy' proved more aggressive than the real thing). Many soldiers, NCOs, and officers have endured two to four NTC rotations. Combat battalions in Germany undertake similar exercises at the Combat Maneuver Training Center, Hohenfels, against a similarly determined and authentically equipped 'enemy'. The 1st Cav. and 2d Armd. Divs. additionally train under almost equally tough terrain and weather conditions at Ft Hood in central Texas; and all AH-64 attack helicopter battalions were also initially

Table A: US Army, Central Units

<i>Unit</i>	<i>Home Station</i>
US Central Command ¹	MacDill AFB, Fla.
US Central Special Operations Command ¹	MacDill AFB, Fla.
Third US Army (US Army, Central)	Ft McPherson, Ga.
22d Theater Army Area Support Command	Formed in Saudi Arabia
800th Military Police Brigade (PW)	Unionville, N.Y.
111th Ordnance and 475th POL Groups	
3d Army Transportation Command	Formed in Saudi Arabia
7th and 32d Transportation Groups	
11th Air Defense Artillery Brigade	Ft Bliss, Tex.
416th Engineer Command	Chicago, Ill.
411th Engineer Brigade	Brooklyn, N.Y.
89th Military Police Brigade	Ft Hood, Tex.
513th Military Intelligence Brigade (Echelon Above Corps)	Ft Monmouth, N.J.
Third Army Signal Command (Prov)	Formed in Saudi Arabia
11th Signal Brigade	Ft Huachuca, Ariz.
Third Army Medical Command (Prov)	Formed in Saudi Arabia
Third Army Personnel Command (Prov)	Formed in Saudi Arabia
Third Army Finance Command (Prov)	Formed in Saudi Arabia
352d Civil Affairs Command	Riverdale, N.Y.
3d Military Police Group (CID)	Ft Monmouth, N.J.

¹. Joint service commands comprising personnel from all services.



US M113A2 APC hauled on an ex-East German National People's Army, Czechoslovak-made P-50 16,200kg transport trailer by a Tatra T815 VVN 26 265 8x8.1R 10,000kg truck with the same origins — a contribution of the Federal

German Army, and still bearing the black and forest green Bundeswehr camouflage. (The world order has indeed changed.) The white rectangle on the APC is a shipping form held on by green tape. (Steve Capps)

trained there. The 3d Armd. Cav. Regt. and 11th ADA Bde. have long trained on Ft Bliss's deserts in far west Texas and southern New Mexico, where all ADA personnel are trained. Likewise, most military intelligence personnel are trained at Ft Huachuca, Ariz.; and the Ranger Course added a Desert Phase at Dugway Proving Ground, Utah, in 1983 — hundreds of DESERT STORM combat arms officers and NCOs have endured this rigorous leaders' course. The 82d and 101st Abn. and 24th Inf. Divs., and many other units and services, have participated in the bi-annual Exercise BRIGHT STAR in Egypt since 1980 (also providing valuable combined training with the Egyptians); in fact the 24th was reactivated in 1976 specifically for use in the Middle East. BRIGHT STAR, conducted in odd-numbered years, is CENTCOM's major overseas joint exercise. In even-numbered years these units participate in Exercise GALLANT EAGLE on the desert terrain of the massive Ft Hunter-Liggett, Calif. At the same time other CENTCOM forces participate in GALLANT KNIGHT, a supporting joint service command post exer-

cise (CPX), at their home stations. CENTCOM staff elements have also conducted many CPXs with the Royal Saudi armed forces. Since 1982 the 82d and 101st Abn., 197th Inf. Bde., and other units have continuously rotated battalions on three-month tours to support the UN's Multinational Force and Observers in the brutal Sinai Desert. The 5th Special Forces Gp., long slated for Southwest Asia, has trained extensively in America's deserts as well as in Egypt. Many Marine units train at Twentynine Palms Marine Corps Base, Calif., also in the Mojave Desert, and the home of the 7th Marine Expeditionary Bde. Air Force, Navy and Marine flyers train extensively over the vast desert air ranges in California and Nevada. The US armed forces are certainly no strangers to the desert.

Command of the deployed US Army forces is somewhat confusing to the uninitiated. Overall command was held by Gen. Norman H. Schwarzkopf, Commander in Chief, USCENTCOM, who controlled all committed US armed forces. CENTCOM deployed to Riyadh, Saudi Arabia, on 26 August 1990. All operational units were under Third US Army, commanded by Lt. Gen. John J. Yeosock, which doubled as US Army CENTCOM (USA-CENTCOM) and co-located with CENTCOM. Third US Army controlled Lt. Gen. Frederick Franks Jr's VII Corps and Lt. Gen. Gary Luck's XVIII Abn. Corps. The 60,000-plus troops of 22d Theater Army Area Command, under Lt. Gen. William Pagonis, oversaw the massive logistical effort, not only for the US but for all allied forces.



US scissors bridges, still bearing European forest green paint, are transported on contracted Saudi carriers. The 64-foot bridges will be mounted on modified M60A1 tank chassis, Armored Vehicle Launched Bridges (AVLB), to cross Iraqi anti-tank ditches up to 60 feet wide. A fuel truck and trailer move into position to service them. (Steve Capps)

Table B: VII (US) Corps Units

<i>Unit</i>	<i>Home Station</i>
HQ, VII Corps	Stuttgart, Ger.
1st Infantry Division (Mechanized)	Ft Riley, Kans.
1st and 2d Brigades	
3d Brigade, 2d Armored Division	Garlstedt, Ger.
1st Cavalry Division ¹	Ft Hood, Tex.
1st and 2d Brigades	
1st Armored Division	Ansbach, Ger.
2d and 3d Brigades	
3d Brigade, 3d Inf. Division (Mech)	Würzburg, Ger.
3d Armored Division	Frankfurt, Ger.
1st, 2d, and 3d Brigades	
1st Brigade, 2d Armored Division ²	Ft Hood, Tex.
2d Armored Cavalry Regiment ³	Nürnberg, Ger.
VII Corps Artillery	Augsburg, Ger.
42d Field Artillery Brigade	Giessen, Ger.
142d Field Artillery Brigade	Fayetteville, Ark.
196th Field Artillery Brigade	Chattanooga, Tenn.
210th Field Artillery Brigade	Herzogenaurach, Ger.
10th Air Defense Artillery Brigade	Darmstadt, Ger.
11th Combat Aviation Brigade	Illesheim, Ger.
7th Engineer Brigade	Kornwestheim, Ger.
14th Military Police Brigade	Ludwigsburg, Ger.
207th Military Intelligence Brigade (Corps)	Ludwigsburg, Ger.
93d Signal Brigade	Ludwigsburg, Ger.
2d Corps Support Command	Neellingen, Ger.

¹ Attached to XVIII Airborne Corps until January 1990. Then became USCENCOM reserve.

² Attached to Marine Forces, USCENCOM.

³ Replaced by 11th Armored Cavalry Regiment in June 1991.

As in any operation of this scope, logistics was the key — and a nightmare. Enough praise cannot be given to the massive logistics effort made by all US services, especially the Air Force, which conducted the largest airlift in history. A major problem did occur: a severe shortage of heavy transports forced the Army to purchase, lease, and borrow additional vehicles from all sources.

The corps is the Army's principal combat, combat support, and combat service support formation. No two are organized the same, being structured as the mission requires. During the Gulf War VII Corps and XVIII Abn. Corps were each composed of three or four divisions, an



US M901 Improved TOW Vehicle (ITV); the dual-tube TOW turret, with integral sights, is retracted in the travel position. The three-man crew's OG duffle bags are strapped on

the outside. The black chevron identifies the ITV's company within its battalion, each company's chevron being oriented differently. (Steve Capps)

armored cavalry regiment (ACR) plus a number of combat support brigades: ADA, engineer, MI (Combat Electronic Warfare Intelligence—CEWI), MP, combat aviation, and signal. These corps were augmented by units drawn from V Corps in Germany, III Corps from Ft Hood, other FORSCOM organizations, and scores of Army Reserve and National Guard units. The III Corps, though on standby and having a large number of its units deployed to the Gulf to augment the other corps and Third US Army, was never itself committed.

The corps artillery consists of an HQ & HQ battery (HHB), FA target acquisition battalion, and three FA brigades. The FA brigades may be placed in direct support of divisions or used for corps deep attack and counterbattery missions. The seven deployed FA brigades had a mix of three or four FA battalions (203mm, 155mm, MLRS).

The three deployed corps support commands (COSCOM) each consisted of several support groups comprising transport, supply, POL (petroleum, oil, lubricants), ammunition, and maintenance battalions and companies. It also possesses a medical brigade.

The Divisions

Divisions, categorized as either heavy or light, are the largest tactical formations with a fixed organization and as such are the principal maneuver forces. Heavy divisions include armored and mech. infantry; light divisions are



US M1026 HMMWV Military Police team halt to check the fastenings of their spare fuel cans. MP HMMWVs mount an M60 MG. The MP to the right wears the high top, Saudi-made suede boots. The black point-up chevron was painted on all coalition vehicles on the eve of the ground war in an effort to limit friendly fire casualties; it is not to be confused with similar subunit identification markings used by some US units. (Steve Capps)

airborne, air assault, and light infantry (none of the latter deployed)¹.

For all practical purposes, the armored and mech. infantry divisions are identical except for the mix of maneuver battalions; but any given division's actual organization will vary, with a strength of 16,000-plus. The 'division base' consists of combat support units that directly support the division and its subordinate unit: Division HQ & HQ company (HHC); ADA, engineer combat, MI (CEWI) and signal battalions; and MP and chemical companies.

The division aviation brigade (sometimes referred to as the 4th) consists of: HHC, armored cavalry squadron, two attack helicopter battalions, and assault helicopter and command aviation companies. The division artillery (DIVARTY) contains all field artillery assets: HHB, three FA battalions (155mm SP), and MLRS and target acquisition batteries. The division support command (DISCOM) consists of three forward support battalions (one per brigade) each containing an HQ & HQ detachment (HHD) and forward supply, maintenance, and medical companies. The main support battalion has an HHD, supply and service, transport, light maintenance, heavy maintenance, missile support, and medical support companies. The DISCOM also has an aircraft maintenance company to supply the aviation brigade.

Standard division structure calls for three maneuver brigades, though most State-side Active Army heavy divisions have only two, augmented by an ARNG 'roundout' separate brigade. Two-brigade divisions also lack one each FA and forward support battalions, engineer company,

and armored cavalry troop, these units being supplied by its roundout brigade. The roundout brigade concept calls for the active division to provide training support and assistance to the brigade, which is equipped with the same weapons, vehicles, and communications systems as its active division. Up to two additional separate brigades may be attached to a division in combat. A brigade can control up to five maneuver battalions, but three to four is the norm. A three-brigade division will normally have ten maneuver battalions assigned, which may be attached to any given brigade as the tactical situation demands. Due to the lack of readiness of the committed divisions' ARNG roundout brigades and the peacetime deployment of others, the divisions sent to the Gulf were often short a brigade, though they received one from other sources.

A three-brigade armored division would normally have six tank and four mech. infantry battalions, while its mech. counterpart would have five of each, though there are variations. In combat a brigade will deploy with its maneuver battalions and a number of divisional units placed in direct support: FA and forward support battalions, and engineer company.

The first heavy division deployed to the Gulf was the **24th Inf. Div. (Mech)** with its 1st and 2d Bdes. from Ft Stewart, Ga. Commanded by Maj. Gen. Barry McCaffrey, it arrived in early September 1990. The division quickly relieved the 82d Abn. and took up positions on the Kuwaiti border. The division's roundout brigade, 48th Inf. Bde. (Mech), Georgia ARNG, was initially not mobilized, causing an outcry from the 48th and National Guard proponents. Like its parent division, it was equipped with M1 tank, and M2 IFVs. They reasoned that the expense and effort expended on the Guard and the Army's self-

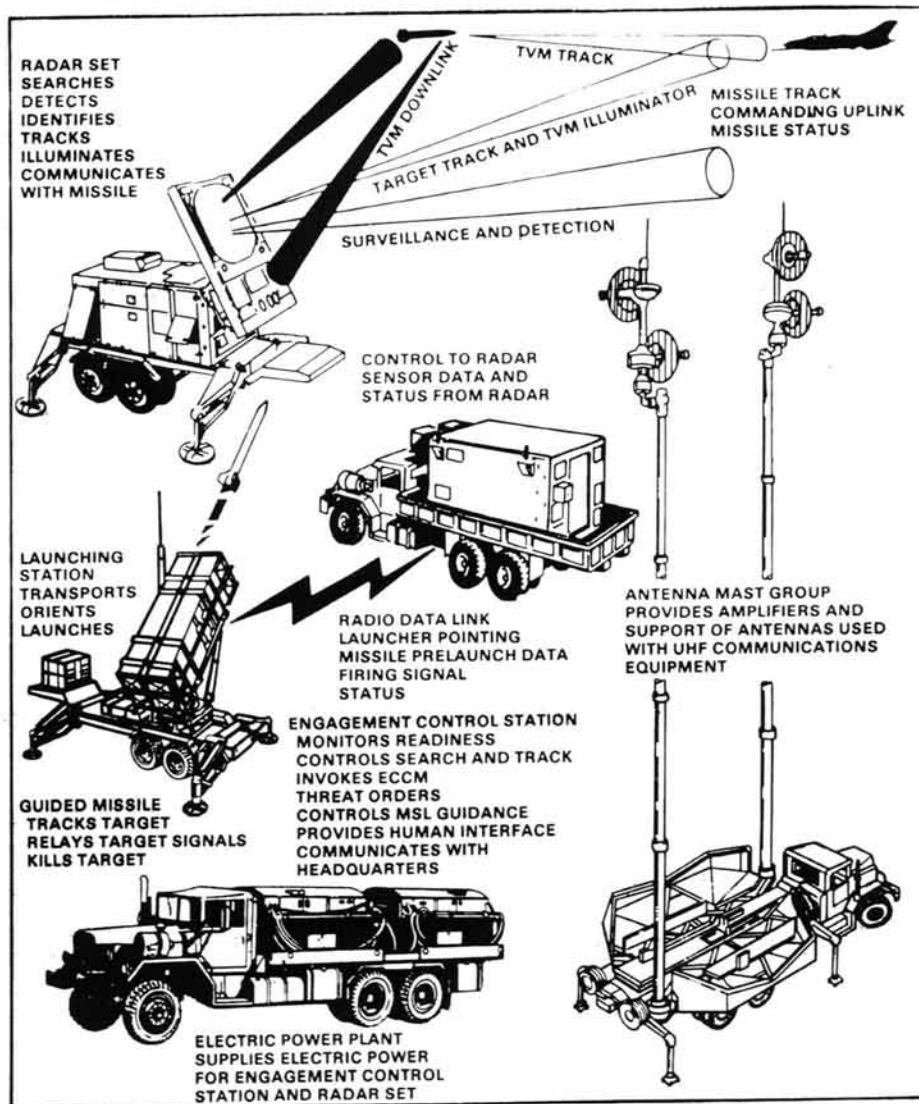
¹ For airborne and air assault division organization, see *Elite 20, Inside the US Army Today* and *Elite 31, US Army Airborne 1940-90*.

professed reliance on the Reserve Components for full mobilization (almost half of the Army's combat units are in the Guard) demanded its employment. However, once the 48th was mobilized in November it proved to be less than prepared (due to upper level command problems and maintenance readiness), as were the other two mobilized ARNG combined arms brigades, and it undertook extensive training at Ft Irwin, Calif. The Active Army 197th Inf. Bde. (Mech) (Sep) from Ft Benning, Ga., was deployed to complete the 24th Inf. Div. This unit was not necessarily ready either, however, being equipped with M113 APCs, though its tank battalion did have M1s. Its two infantry battalions were re-equipped with M2 IFVs, requiring an extensive retraining programme.

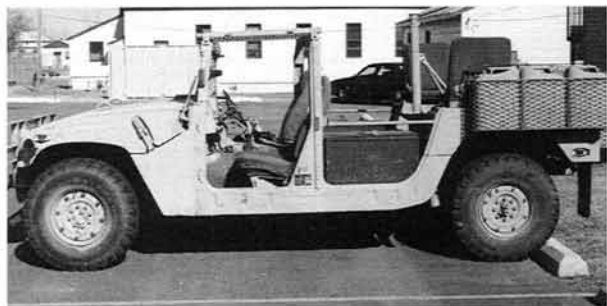
The next heavy divisions to deploy virtually emptied Ft Hood, Tex. The 1st Cav. Div., a two-brigade armored

division, was deployed in mid-October under the command of Brig. Gen. John Tilelli. The division was attached to XVIII Abn. Corps until January 1991 when it switched over to VII Corps. Its 155th Armd. Bde., Miss. ARNG, was mobilized in November and sent to train at Ft Hood. The 2d Armd. Div. was scheduled for inactivation in 1991 and its 2d Bde. had already folded. Its remaining State-side 1st Bde. ('Tiger Bde.')

and other divisional assets were initially attached to the 1st Cav. Div. to bring it up to strength; it was attached to the Marines after Christmas. The 1st Inf. Div. (Mech) from Ft Riley, Kans., was deployed in December with its 1st and 2d Bdes. under Maj. Gen. Thomas Rhame. Its 3d Bde., 1st Inf. Div. (Forward), in the process of inactivation, had been stripped of troops and equipment to strengthen units deploying from Germany. The 3d Bde., 2d Armd. Div. (Forward), for all



The complexities of the 'SCUD-busting' Patriot MIM-104 air defence missile system are demonstrated by this diagram. Besides the four-missile M901 launch stations so often seen on TV, the system requires the support of a sophisticated command, control, and communications system. An 876-man Patriot ADA battalion comprises an HHB and six firing batteries; each with an HQ and one each maintenance, fire control, and launcher platoons, the latter with four launch stations. (US Army)



A 3d SFGA Desert Mobility Vehicular System (DMVS — 'dumvee', as opposed to 'humvee'), a modified HMMWV, prior to being shipped to the Gulf. Modifications include a weapon pestle mount, quick-change wheels, larger fuel tank,

water and fuel can racks on the sides and rear, equipment boxes (behind the front seats, dark brown), and gunners' seats (above the rear wheels). A special 1-ton DMVS trailer is also available. (Author's collection)

practical purposes a separate brigade based at Garlstedt, Germany, was deployed and attached to the 1st Inf. Div.

The III Corps' 3d Armd. Cav. Regt. was deployed from Ft Bliss, Tex., and attached to XVIII Abn. Corps. It was the only State-side unit equipped with M1A1 tanks. The 3d ACR was the first US unit to engage Iraqi forces during a skirmish on 22 January 1991.

The next wave of divisions were ordered to deploy from Germany on 7 November in an unprecedented move made possible by the now negligible threat from the USSR and defunct Warsaw Pact. These units were equipped with M1A1 tanks and M2A1 IFVs. Drawn from Seventh Army, V and VII Corps, their deployment is especially notable in that they, unlike their State-side counterparts, had never exercised out-of-area deployments; overseas movement plans were non-existent. While VII Corps formed the core of this force, 26,000 V Corps troops were also deployed. The last units arrived in Saudi Arabia on 15 January; and the US build-up was complete.

Maj. Gen. Ronald Griffith's 1st Armd. Div. at Ansbach deployed with its 2d and 3d Bdes.; its 1st Bde. remained in Germany as it had not yet received M1s and M2s. The 3d Bde., 3d Inf. Div. (Mech), from Würzburg, was attached in its place.

The V Corps' 3d Armd. Div. from Frankfurt, under Maj. Gen. Paul Funk, was the only heavy division to deploy with all three brigades. It was the last to arrive in the theater and was attached to VII Corps. The VII Corps' 2d Armd. Cav. Regt. was deployed from Nürnberg, to be replaced by V Corps' 11th ACR from Fulda in early June 1991.

The first division to arrive in Saudi Arabia, on 8

August 1990, was (as might be expected) the 82nd Abn. Div. from Ft Bragg, N.C. commanded by Maj. Gen. James Houston. Since the mid-1960s the 'All Americans' have been maintained as the first-line rapid deployable strategic reserve force. The 1st Bde. had jumped into Panama in 1989. Initially the 82d established hasty defensive positions on the Kuwait border, but was later placed in reserve.

The 101st Abn. Div. (Air Assault), commanded by Maj. Gen. James H. B. Peay III, is the Army's only airmobile formation, capable of moving one-third of its combat elements in a single lift with organic helicopters; its airborne designation is traditional only. The division's first elements arrived on 11 August 1990, but it was not entirely in place until late September.

These first units initially protected air bases, and were flown into Dahrhan Air Base and King Abdul Aziz Airport near Damman. Both were under XVIII Abn. Corps alongside the 24th Inf. Division. These two divisions were extremely well trained, with many of the battalions having rotated through the Joint Readiness Training Center (JRTC), Ft Chaffee, Ark. In fact the 101st's lead battalion

Table C: XVIII (US) Airborne Corps Units

<i>Unit</i>	<i>Home Station</i>
HQ, XVIII Airborne Corps	Ft Bragg, N.C.
24th Infantry Division (Mechanized)	Ft Stewart, Ga.
1st and 2d Brigades	
197th Infantry Brigade (Mech) (Sep)	Ft Benning, Ga.
82d Airborne Division	Ft Bragg, N.C.
1st, 2d and 3d Brigades	
101st Airborne Division (Air Assault)	Ft Campbell, Ky.
1st, 2d, and 3d Brigades	
3d Armored Cavalry Regiment	Ft Bliss, Tex.
XVIII Airborne Corps Artillery	Ft Bragg, N.C.
18th Field Artillery Brigade (Abn)	Ft Bragg, N.C.
75th Field Artillery Brigade	Ft Sill, Okla.
212th Field Artillery Brigade	Ft Sill, Okla.
11th Air Defense Artillery Brigade	Ft Bliss, Tex.
12th Combat Aviation Brigade	Wiesbaden, Ger.
18th Aviation Brigade (Abn)	Ft Bragg, N.C.
20th Engineer Brigade (Abn)	Ft Bragg, N.C.
16th Military Police Brigade (Abn)	Ft Bragg, N.C.
525th Military Intelligence Brigade (Abn)	Ft Bragg, N.C.
35th Signal Brigade (Abn)	Ft Bragg, N.C.
1st Corps Support Command	Ft Bragg, N.C.
44th Medical Brigade	Ft Bragg, N.C.

The US Army was loaned a number of West German-made Fox (Fuchs) NBC reconnaissance vehicles to equip divisional chemical companies. The Army had previously purchased some of these excellent vehicles for testing, and plans to adopt the system. (Naydean Blair)



for the deep flanking airmobile thrust into Iraq was selected not because it was considered the best trained or led by the most aggressive commander, but because it had most recently endured the JRTC, giving it an extra edge.

Combat Arms Battalions

Combat arms battalions include maneuver (mech. infantry, tank, cavalry, various types of light infantry), field artillery (FA), air defense artillery (ADA), aviation, and combat engineer. All are commanded by lieutenant-colonels backed by a complete staff, HHC (battery or troop in FA and cavalry units), and three to five lettered companies (batteries or troops).

Heavy maneuver battalions are the Army's principal fire and maneuver units. Both mech. infantry and tank battalions are organized on a parallel basis. Their HHC is composed of communications, maintenance, support (supply, transport, fuel, mess), medical, scout, and heavy mortar platoons. The scout platoon was 6 x M3 Bradley cavalry fighting vehicles (CFV — same as the M2, but without firing ports). The heavy mortar platoon has 6 x M106A2 SP mortar carriers mounting 107mm (4.2-inch) M30 mortars.

All deployed mech. infantry battalions (47 officers, 775 enlisted) were equipped with the modern M2 or M2A1 Bradley infantry fighting vehicle (IFV) rather than the older M113-series APC (though the latter are still used as support vehicles in a wide range of variants). There are four rifle companies each with an HQ and three rifle platoons with a total of 13 x M2 IFVs; there are no company-level mortars. The antiarmor company (Co. D) has an HQ and three platoons equipped with 4 x M901 Improved TOW Vehicles (ITV — twin TOWs on a modified M113).

The rifle platoons are organized entirely differently from their more traditional light counterparts. In early 1990 Bradley-equipped platoon reorganized from three small rifle squads carried in three M2 IFVs with the platoon HQ carried in a fourth. It was now composed of two sections, each with two IFVs; Section A is commanded by

the platoon leader and Section B by the platoon sergeant. Each of the four IFVs has a mounted four-man fire team with a squad leader riding in the section leader's IFV. This permits room for the attached forward observer and medic. The fire teams can dismount, providing each IFV with local security, or they can consolidate under their squad leaders as a two-squad fire and maneuver element while the IFVs provide fire support. This also permits a vehicle commander to remain in each IFV when the squads dismount. Each M2 IFV (and M3 CFV) mounts a 25mm M252 Brushmaster chain gun, 7.62mm M240C coaxial MG, and twin TOW launcher. These weapons are sighted by a day/night thermal sight, the 25mm being fully stabilized. The Bradley is an extremely advanced combat vehicle and easily able to keep pace with the M1 tank. The two rifle squads are armed the same as their light counterparts described below, but with the addition of an organic M47 Dragon plus 6 x 5.56mm M231 firing-port weapons per IFV.

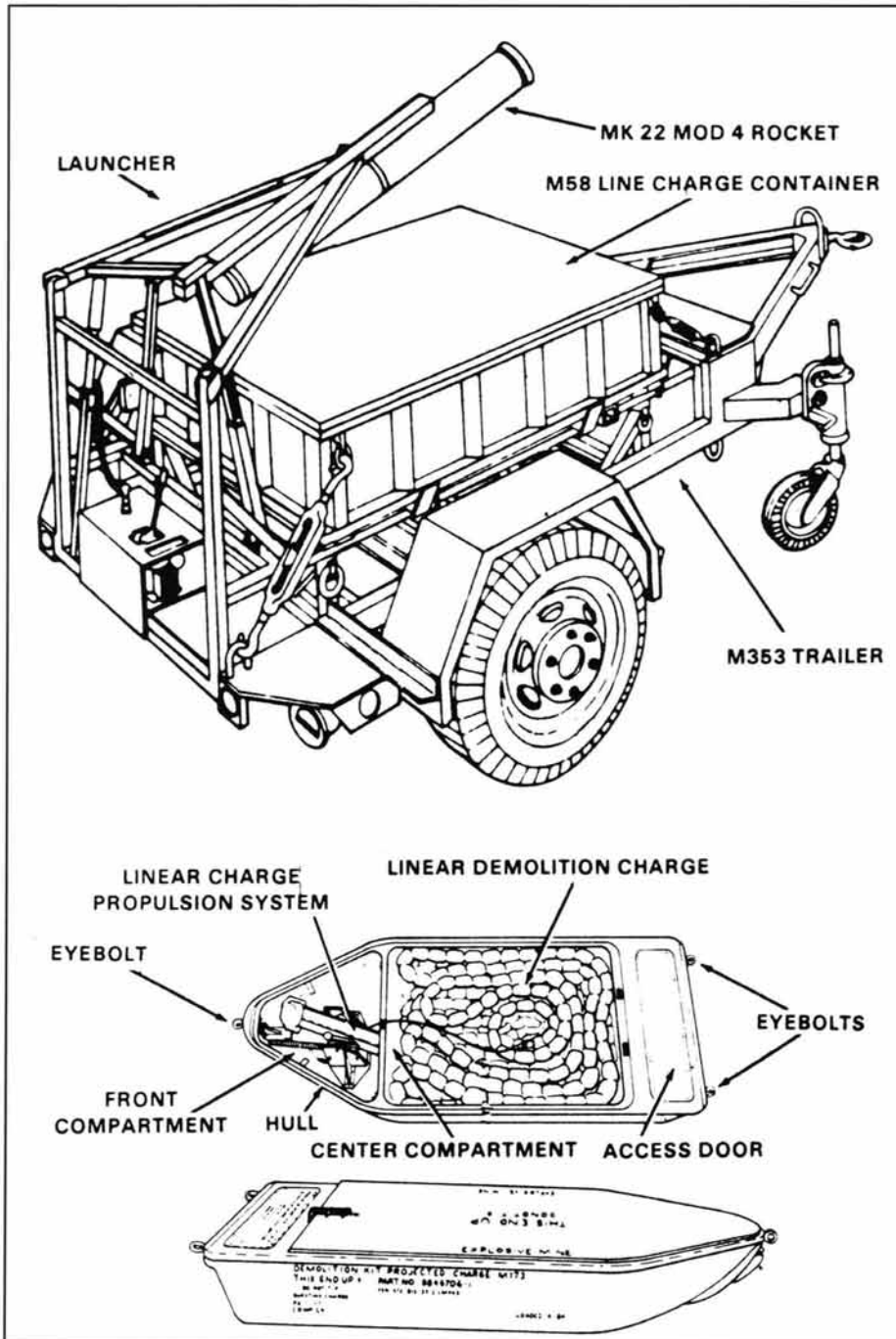
Tank battalions (42 officers, 504 enlisted) have four tank companies each with three platoons, each with four Abrams tanks, plus two in the company HQ. All units deployed from Germany were equipped with the improved M1A1 with a Rheinmetall 120mm M256 gun. All units deploying from the States, with the exception of the 3d ACR, came with the M1 or IPM1 mounting a 105mm M68E1. In September 1990 it was decided to swap the 1st Cav. and 24th Inf. Divs.' (plus their attached brigades') M1 and IPM1 tanks for M1A1s, due to the latter's larger gun, NBC protection, and enhanced armour. Almost new M1A1s were drawn from Prepositioned Materiel Configured in Unit Sets (POMCUS) storage sites in Germany and shipped to Saudi Arabia. Crew retraining took place at Damman under the control of the Armor Center's New Equipment Training Div., augmented by NCOs from the 194th Armd. Bde., both from Ft Knox, Ky. The training was completed before Christmas.

The 82d Abn. Div. deployed with 43 of the Army's

only combat-operational M551A1 Sheridan light airborne assault vehicles in its air-dropable tank battalion. The Sheridan, successfully parachuted into Panama, has a 152mm gun/launcher capable of firing a conventional projectile or a wire-guided Shillelagh ATGM.

In combat, heavy maneuver battalions are organized into 'task forces' (TF), achieved by cross-attaching companies between battalions; it is seldom that battalions will

fight 'pure'. A mech. infantry battalion TF may have one of its rifle companies detached to a tank battalion, in exchange for a tank company. However, it is possible for a given battalion to retain all of its companies and still receive an additional one through cross-attachment. A 'company slice' of HHC service support elements accompanies a company for this attachment. Other small brigade and divisional elements may also be attached, e.g. an engineer platoon,



Two US Army and Marine mine-clearing systems used to breach Iraqi defences. Top: The M58A4 Mine-Clearing Line Charge (MICLIC) kit, mounted on a 3½-ton M353 trailer, consists of a 127mm MK 22 MOD 4 rocket capable of propelling a 350-foot linear demolition charge with 1,750lbs of C4 across an antitank minefield. Positioned 50 metres from the minefield's edge, it will blast a 5-metre wide, 100-metre long path. Bottom: The lighter M173 projected charge demolition kit is mounted in an M3 skid (145x57x24in.), capable of being dragged behind an armoured vehicle. The fibreglass skid is OG with yellow markings. The rocket-propelled M96 linear demolition charge is 300ft. long and composed of 1,500lbs. of C4. It will blast a 4-metre wide, 70-metre long path through a minefield. (US Army)



Stinger AD missile teams (one per company), and ground surveillance radar teams.

Likewise there will be cross-attachment between companies, thus forming 'company teams': e.g. a tank company may have a rifle platoon attached and may or may not lose a tank platoon. Antiarmor sections are attached from the antiarmor company; and FIST, or fire support teams (artillery/mortar forward observers, also capable of directing attack helicopters and close air support), are attached from a supporting FA battalion.

Two types of light infantry battalions were committed to DESERT STORM: airborne and air assault (both with 42 officers, 636 enlisted). The two are almost identical, except the airborne battalion has fewer vehicles (counting motorcycles) than the air assault; 85 as opposed to 156. Both possess an HHC composed of a battalion HQ; staff sections; scout, mortar (4 x 81mm M252 [British L16A1] or M29A1), communications, support, and medical platoons and a maintenance section. The antiarmor company (Co. D) has five platoons, each with 4 x M220A1 TOW systems mounted on HMWWVs.

Both battalions have three rifle companies with an HQ and three rifle platoons comprising an HQ and three rifle squads. The nine-man rifle squads are potent, being armed with 7 x 5.56mm M16A2 rifles, 2 x 40mm M203 GLs, and 2 x 5.56mm M249 squad automatic weapons (SAW). Additionally, they carry a mix of hand grenades and LAWS: the 66mm M72A3 and/or the new 84mm M136 (Swedish AT-4). The nine-man weapons squad has two each

US Marines, as part of the early acclimatization programme, conducted rigorous physical training and competitive field events. These Marines wear DBDUs with OG undershirts. (USMC)

7.62mm M60 MG and Dragon ATGM teams. The company mortar section has 2 x 60mm M224 mortars.

Field artillery battalions consist of an HHB and three batteries with varied numbers and types of weapon systems: 105mm towed howitzer — 6 x M102 in the 82d and 101st Abn. Divs.; 155mm towed howitzer — 8 x M198 in some FA brigades; 155mm SP howitzer — 8 x M109A2/A3 in heavy divisions' DIVARTYs and FA brigades; 203mm SP howitzer — 8 x M110A2 in FA brigades; and Multiple Launch Rocket System (MLRS) — 9 x M270 in some FA brigades plus a single battery in heavy DIVARTYs.

Armored cavalry regiments (ACR) consist of three battalion-size squadrons plus MI, engineer and chemical companies; air cavalry troop; ADA battery, and service support squadron. The squadrons (42 officers, 623 enlisted) are potent combined arms units with an HHT, three armored cavalry troops (12 x M3 CFVs, 9 x M1A1 tanks, 2 x SP 107mm mortars), tank company (14 x M1A1s), and 155mm SP howitzer battery (8 x M109A2/3s). They provide forward covering forces and reconnaissance, flank screening, or act as a corps counter-attack force.

Heavy division armored cavalry squadrons (64 officers, 479 enlisted) perform similar missions but are differently

organized, with an HHT and two each ground recon. and air recon. troops. Division squadrons have no tanks; only 40 x M3 CFVs. The 82d and 101st have air cavalry squadrons with an HHT, one ground recon. troop (LAV-25s in 82d, HMMWVs in 101st), and three air recon. troops.

Each division also has an engineer combat battalion with an HHC and four companies. They are equipped to clear obstacles, breach minefields, build and repair roads and fortifications, and construct obstacles. A wide range of specialized engineer units from the corps engineer brigade can augment divisions, along with additional combat engineer battalions.

Aviation attack helicopter battalions are considered key fire support units. Their three attack companies have either 18 x AH-64 Apache or 21 x AH-1S Cobra gunships along with 13 x OH-58C/D Kiowa scouts. Both the Apaches, with eight laser-guided Hellfire missiles and a 30mm chain gun, and the Cobras, with eight TOW missiles and a three-barrel 20mm rotary gun, proved to be deadly tank killers, knocking out about 1,000 Iraqi tanks and many other combat vehicles. They were also employed to attack Iraqi air defences, including taking out radar systems 200km inside Iraq to open a path for the first attack aircraft.

By late January a total of 575,000 US personnel of all

services were in the theater. By the beginning of the ground war about 260,000 Army troops were prepared to launch the offensive. A force was assembled of over two dozen each mech. infantry and tank, nine each airborne and airmobile infantry, over two dozen attack helicopter, and 40-plus FA battalions, along with 11 armored cavalry and two air cavalry squadrons. These units fielded almost 2,000 M1A1 tanks, over 2,200 M2 and M3 Bradleys, almost 500 artillery pieces, and 190 Apache and 150 Cobra attack helicopters.

The largest reserve call-up since World War II saw USAR and ARNG activated. The vast majority of these 158,000 personnel were service support units deployed to Saudi Arabia, without which the Army could not function when fully deployed. Other units remained in the States replacing active counterparts sent to the Gulf. The first units were mobilized on 27 November, but many individual reservists were also called up to fill speciality positions and vacancies in active units.

Unfortunately, a detailed order of battle of US forces is not possible: this information has not yet been fully released. Combat battalions were also switched within divisions to serve with other than their traditional brigades; others were drawn from other divisions due to readiness levels.

Special Operations Forces

Special Operations Forces (SOF) have undergone an extensive reorganization in recent years. All three armed services' SOF are jointly co-ordinated by the US Special Operations Command (USSOCOM) at MacDill AFB, Fla.

Army SOF are under the US Army Special Operations Command (Abn) (USASOC) at Ft Bragg, N.C. This oversees the US Army Special Forces Command (Abn) (USASFC — formerly, 1st SOCOM) under which are all Special Forces groups; the US Army Civil Affairs and Psychological Operations Command (Abn) (USACAPOC — formerly, US Army Reserve Special Operations Command, USAR SOC) controlling all Active and Reserve CA and psyop. units; and the US Army John F. Kennedy Special Warfare Center (USAJFKSWC) responsible for Army SOF training. USASOC also has direct control over the 75th Ranger and 160th Special Operations Avn. Regts. The 1st Special Operations Det.-D (better known as 'Delta Force') and SEAL Team 6 are subordinate to the Joint



A Marine M249 SAW gunner during night assault training. Each of a Marine rifle squad's three

fire teams possesses a SAW. His medium ALICE rucksack has been painted tan. (USMC)

Special Operations Command (JSOC) and tasked with 'special activities', principally counterterrorism.

The Air Force Special Operations Command (AFSOC) controls the 1st (US), 39th (Germany), and 353d (Philippines) Special Operations Wings (SOW) plus other specialized units. Most elements of the 1st SOW deployed from Hurlburt Field, Fla., joined by elements of the 39th SOW. Elements of AFSOC's 1720th Special Tactics Gp. with its Combat Control Teams (CCT) and para-rescue forces also deployed. A number of security police squadrons provided air base ground defence.

The Navy Special Warfare Command (NAVSPECWARCOM) is responsible for Naval Special Warfare (SPECWAR) Groups, SEAL Teams, SEAL Delivery Vehicle (SDV) Teams, and Special Boat Squadrons. SEALs and their various supporting units conduct special reconnaissance; direct action missions; target acquisition, vessel boarding, search and seizure; combat search and rescue; and support amphibious operations. Two platoons each from SEAL Teams 1 and 5, a platoon from SDV Team 1, and two detachments from SBU 12 were formed into three Naval SPECWAR Task Units. They were originally involved in training allied forces, and with special missions on the Kuwaiti coast and even up the Euphrates River into Iraq. These were subordinate to a Naval SPECWAR Task Group, from Naval SPECWAR Gp. 1 and supported by Navy SPECWAR Unit 1.

Company-size SEAL teams are made up of a small HQ platoon and from 10 to 14 operational platoons, each with two officers and 12 enlisted men, split into two seven-man squads — just the right size for a Rubber Boat, Inflatable (RBI). A varied number of platoons can be formed into a detachment to accomplish specific missions. SDV teams have up to five platoons, each with up to three MK VIII and/or IX 'mini-subs'. The SBUs are equipped with MK 2 PBR patrol boats plus more specialized models.

Each of the US armed forces' five regional unified commands has a dedicated special operations command to co-ordinate deployed joint service SOF. USCENTCOM's is the US Special Operations Command Central (USSOC-CENT) under Col. Jessie Johnson. Headquartered in peacetime at MacDill AFB, it deployed to Saudi Arabia early in DESERT SHIELD and was co-located at Riyadh with CENTCOM. A side range of SOF units were assembled to form joint Special Operations Task Force Central (JSOTFCENT).

The 5th Special Forces Gp. (Abn) (SFGA), from Ft Bragg, was augmented by personnel from the 7th SFGA, also from Ft Bragg, and the 10th SFGA from Ft Devens, Mass. The augmentation personnel comprised principally snipers, HALO-qualified jumpers, and other specialists. The 5th SFGA began deploying in the second week of



A Marine LAV-25 light armoured vehicle. Bearing OG base colour, it has been over-painted with irregular sand-colour

bands. A LAV-25 has a three-man crew and transports a six-man scout team. (USMC)

September with some elements equipped with Desert Mobility Vehicular Systems (DMVS) — modified HMMWVs.

When first deployed, the 5th SFGA was employed to upgrade the training of coalition Arab forces. This included small unit tactics, antiarmour techniques, NBC defense, communications, and other skills. A large number of Kuwaiti refugees were also trained and formed into light infantry brigades. Much of the group was then broken down into 108 liaison teams and attached down to battalion level with Arab forces, and at brigade level with the British and French. Initially regarded with suspicion by some, they were able to gain acceptance by providing access to some US intelligence; they also possessed what were to become indispensable Global Positioning System (GPS) devices; and could call for fire support (artillery, attack helicopters, tac air). For this latter task they were trained by USAF Tactical Air Control Parties (TACP), themselves attached to coalition divisions and brigades.

Cross-border operations into Iraq and Kuwait began on the first night of the air war, with some special reconnaissance missions executed even earlier. One of these included a combined USSF and British SAS raid into Kuwait on 7 January to recover an entire Soviet-made radar system from an air defence missile site. Reporters, seeing the returning helicopters, assumed they were a defecting Iraqi helicopter unit and reported them as such. Reports also indicate that US and British helicopters were painted in Iraqi colours; and that Soviet-made Mi-8



A Marine grenadier armed with a 40mm M203 GL mounted on an M16A2 rifle. The GL's indirect fire sight is mounted on the rifle's carrying handle. Interestingly, a red bracelet bearing the name and date of a man missing in action in the Vietnam War is just visible on his right wrist. (USMC)

helicopters (as used by the Iraqis and obtained from an unidentified source) were employed for these cross-border missions. Cross-border missions included deep reconnaissance and surveillance, prisoner snatches, raids to disrupt command and control and gain intelligence, combat search and rescue, and target designation. This latter mission was accomplished by the use of hand-held Laser Target Designators (LTD); targets were 'lased' by SOF teams inserted behind enemy lines, enabling fast moving aircraft to identify them from among the confused array of structures on airfields and in built-up areas. The aircraft then designated the marked target with their own LTD and launched their 'smart' weapons. SOF surveillance teams also screened the advancing coalition forces' flanks.

It is known that SOF teams were operating near Iraqi air bases and other military facilities, penetrated inside Baghdad and Kuwait City, and went SCUD hunting in western Iraq. The recently reactivated Ft Bragg-based 3d SFGA (then composed of only the 1st Bn. but augmented by Co. A, 3d Bn., 10th SFGA; 4th Sdn., 17th Cav. and some 500 Kuwait SF.) operated in Kuwait and Iraq. The SEALs were allotted the Kuwait City area (though it was 3d SFGA elements that secured the US Embassy); and Delta Force was given responsibility for western Iraq to hunt down SCUD launchers. Co. A, 1st Bn. and Co. A, 2d Bn., 10th SFGA assisted the USAF with search and rescue of downed aircrews launched out of Turkey. A company of the 75th Ranger Regt. was deployed as an immediate action strike force.

As one officer put it, Iraq and Kuwait became 'a special

operations theme park'. This largest SOF effort in history was not without its human and material costs, however; all US services' SOF units lost a total of 22 personnel. The US SOF forces worldwide were stripped of specialized long-range radios, LTDs, sniper weapons, and other vital items.

The 160th Special Operations Avn. Regt. (Abn) contributed TF 160 built around its 3d Bn. from Ft Stewart, Ga., and augmented by 2d Bn. elements from Ft Campbell. One of the main SOF capability shortfalls was an insufficient number of SO aircraft. Each regional special operations command was intended to have a partner theater area special operations support command (TASOSC) to co-ordinate service support and their extensive intelligence needs. Though four of the five TASOSCs were activated, as chance would have it CENTCOM's 5th SOSOC had not yet been activated, but was hastily formed in Saudi Arabia and the USASFC's 112th Signal and 528th Spt. Bns. (Abn) attached.

SOF also includes psychological operations units, which conducted an extremely intense psyop. campaign. Due to the peculiarity of Arab concepts and beliefs to Western eyes, psyop. actions were tightly controlled and approved by a combined committee. Using leaflets (coupled with bombings), loudspeakers, and two Voice of America and other radio stations, it is estimated that up to one-third of the Iraqi troops were convinced to surrender or desert. Civil affairs units, also SOF, are heavily involved with the rebuilding of Kuwait under the USAR's 352d CA Command.

US Marine Corps

The USMC, a component of the Navy, is a completely self-contained combined arms force comprising ground, air, and service support forces. The two Fleet Marine Forces (FMF), integral to the Atlantic and Pacific Fleets, control the Marines' main operational elements in the form of three huge Marine expeditionary forces. The Marines are intended as a rapid, sea-deployable force concentrating on amphibious forced entry, though airmobile insertion is of equal importance; they excel at cross-beach logistics.

A Marine ground unit organization chart does not appear to differ markedly from an Army one, but the Marines' task organization for combat is far different. The sea soldiers use a concept known as Marine Air-Ground Task Forces (MAGTF) comprising command, ground combat, aviation, and service support elements regardless of the MAGTF's size.

The largest of these is the Marine Expeditionary Force (MEF), typically consisting of a reinforced Marine division; Marine Aircraft Wing (MAW); recon., surveillance and intelligence group; and force service support group — around 50,000 Marines and 3,000 sailors (medical personnel, naval gunfire teams, liaison officers) when fully augmented. A second division can be attached, along with smaller units. The Corps maintains three MEFs: I on the West Coast, II on the East Coast, and III in the Western Pacific.

The MAW is a self-contained 'air force' with air control and wing support groups, and usually four Marine aircraft groups (two helicopter and one each fighter and attack) each with two to four of various types of squadrons, totalling up to 160 each fixed- and rotary-wing aircraft, including AH-1J/W Sea Cobras. All AD missile units (Stinger and Hawk) also belong to the MAW.

The Force Service Support Group (FSSG) provides

all types of support to all elements of the FMF and MEF. The Marine division in particular relies on the FSSG as it possesses no organic major service support units. The FSSG has HQ and service, maintenance, supply, engineer support, motor transport, medical, dental, and landing support battalions. The FSSG also provides detachments to support smaller MAGTFs.

The Marine division, one per MEF and bearing the same number, can be described as a heavy infantry division with about 18,250 personnel. While it possesses three mobile armoured units, its infantry battalions are heavily armed 'straight-leg' infantry (though a second tank battalion was attached to the two divisions in Saudi Arabia). It has only limited logistical support in the division HQ battalion with HQ, MP, communications, truck, and service companies. (Marine battalions have an HQ and service company [H&SC] in addition to its others.) The division has a four-company combat engineer battalion. The recon. battalion has four companies, principally for conducting foot patrols; it cannot execute more aggressive combat operations such as reconnaissance in force, covering force, or screening. It is not to be confused with force recon. companies, which are true specialized LRRP units.

The tank battalion has four companies each with 17 x M60A1 tanks (three platoons of five and two in the HQ). It also has an antitank company with three platoons each with 24 x HMMWV-mounted TOW ATGMs, plus a recon. platoon with 8 x HMWV's mounting TOWs, 40mm GLs, and .50-cal. MGs. The TOW platoons are generally attached to infantry regiments with sections further attached to battalions and rifle companies. In 1989 the USMC made the decision to purchase M1A1 tanks to replace the M60A1s, but none would be available until 1991. The Army agreed to loan the Marines 106 M1A1s from POMCUS stocks. The Marine M1A1 companies

Marine HMMWVs of a battalion recon. platoon assume a 'herringbone' halt formation as they pull off a desert track. The nearest mounts a 40mm MK19 MOD 3 automatic GL, called a heavy MG by the Marines, while the far two mount .50-cal. M2 MGs. (USMC)



were to be organized the same as the Army's with four-tank platoons, but when the 2d and 8th Tank Bns. were re-equipped in October and November the five-tank platoons were retained as the crews were available and trained to function as such; the crews were retrained by the Army. The 1st and 4th Tank Bns. retained M60A1s fitted with Blazer reactive armour, but lacking thermal sights.

The light armored infantry (LAI) battalion is equipped with General Motors of Canada 8 x 8 light armored vehicles with a 25mm chain gun and 2 x 7.62mm MGs (LAV-25), plus other variants. The three LAI companies have three platoons (4 x LAV-25s carrying six-man scout teams) and 2 x LAV(C) command vehicles in the HQ. The weapons company has antiarmor (16 x LAV(AT) with TOWs), mortar (8 x LAV(M) with 81mm), and recon. (8 x LAV-25) platoons. The unit is capable of recon. and offensive operations.

The assault amphibian battalion is principally intended to land the first wave of an amphibious assault, but was used in the desert to haul troops and supplies while providing some protection from artillery; they were not used by the lead assault forces. The battalion's four amphibian tractor companies have four platoons with 10 x AAVP-7A1 Amphibious Assault Vehicles, Personnel (formerly LVTP-7 Landing Vehicle, Tracked, Personnel) and can land an infantry battalion's assault elements (25 troops each). All AAVP-7A1s have a turret-mounted .50-cal. M85 MG, but some have been modified to also mount a 40mm MK 19 MOD 3 GL. Most deployed to the Gulf were fitted with appliqué armour kits. Specialized command and support variants of the AAV-series equip the H&SC.

The artillery regiment has an HQ battery and five battalions, all equipped with towed 155mm M198 howitzers. The regiment's 1st through 3d and 5th¹ Bns. have three batteries of eight tubes while the 4th has six-tube batteries, for attachment to a Marine expeditionary brigade due to limited shipping space. Three battalions of the non-divisional 10th Marines were deployed with 155mm towed and SP pieces plus 203mm M110A2 SP howitzers.

The three infantry regiments (174 officers, 3,541 enlisted) each have an HQ company and three infantry battalions. These have H&SC, weapons and three rifle companies. Rifle companies possess an HQ, weapons and three rifle platoons with three squads. The 13-man rifle squads are divided into three fire teams, with a total of ten M16A2 rifles, three M203 GLs, and three M249 SAWs. The weapons platoon has machine gun (6 x M60E3s), assault weapon (6 x 83mm MK153 MOD 0 Shoulder launched Multi-purpose Assault Weapon [SMAW] rocket launch-

ers), and mortar (3 x 60mm M224) sections. The weapons company has an HQ, machine gun (.50-cal. M2), grenade launcher (40mm MK19 MOD 3), antitank (32 x Dragon ATGMs), and mortar (8 x 81mm M252) platoons, all transported by HMMWVs.

Like the Army's brigades, since 1965 two to five Marine battalions are attached to regiments as the mission dictates. It is not uncommon for a regimental HQ to control three battalions, all attached from different regiments, while its 'own' battalions are attached to other regiments or MEUs.

The surveillance, recon. and intelligence (SRI) group¹ controls all MEF intelligence collection assets. It includes an H&SC, force recon., air naval gunfire liaison (ANGLICO), remotely piloted vehicle, radio, and intelligence companies, plus a communications battalion (which also conducts EW).

The next MAGTF is the Marine Expeditionary Brigade (MEB) consisting of a Regimental Landing Team (RLT) reinforced with armour and artillery; Marine Aircraft Group (MAG); and Brigade Service Support Group (BSSG). An MEB can field from 8,000 to 18,000 Marines and sailors and up to half the aircraft found in an MEF's MAW. The regiments are drawn from divisions and the air assets from MAWs, as an MEB has no organic combat units (with the exception of the 1st MEB at Marine Corps Air Station Kaneohe Bay, Hawaii, which is assigned the 3d Marine Regt.)

The smallest MAGTF is the Marine Expeditionary Unit (MEU)¹ comprising a Battalion Landing Team (BLT), reinforced composite helicopter squadron, and MEU service support group, totalling about 2,000 personnel. The BLT is usually reinforced with a 155mm battery and tank platoon. MEUs are designated by a two-digit number, the first identifying the parent FMF and the second the MEU's number. The BLTs and other units are rotated, usually on a six-month overseas deployment. Prior to deployment the BLT will normally undertake an intense six-month training cycle to qualify it as Special Operations Capable resulting in the MEU being designated, i.e. 26th MEU (SOC). SOC training includes short notice amphibious raids, hostage rescue, and evacuation of civilians from hostile areas.

The Marines were quick to respond to the deployment order received on 3 August. Elements of Maj. Gen. John Hopkins' I MEF from Camp Pendleton, Calif., and other bases in the state began to arrive at Al-Jubayl, Saudi Arabia, on the 17th, and within weeks 45,000 men were in-

¹ The 5th Bns. had, until mid-1990, 203mm and 155mm SP howitzers.

¹ A new organization formed in late 1989 by consolidating existing units under a common command.

² Prior to 1989 the term 'Amphibious' was used in lieu of 'Expeditionary' in MEF, MEB, and MEU.



place. I MEF's core, the 1st Marine Div., consisted of the 1st, 5th, 7th and 11th Marine Regts. (the latter is artillery, with four battalions) and 1st and 2d Tank Bns. — the first US main battle tanks to arrive in-theater. Also deployed were the 1st RSI Gp., 3d MAW, and 1st FSSG. The 4th MEB remained afloat aboard Amphibious Gp. 2 as an off-shore reserve. In the midst of this the 22d MEU (SOC) evacuated US citizens from war-torn Liberia on Africa's west coast, and then proceeded to the Gulf. The 26th MEU remained in the Mediterranean on stand-by. These forces took up defensive positions south of Kuwait near the coast. The 7th MEB's heavy equipment and 30 days' supplies were aboard Maritime Pre-Position Ship Sdn. 2 (MPS-2) at Diego Garcia in the Indian Ocean to support a Southwest Asia deployment¹. The 1st MEB's (with 3d Marines') equipment was aboard MPS-3. In the early days of January elements of the 4th MEB refocused their mission and evacuated US civilians and other nationalities from Somalia during a sudden revolt.

On 9 November the II MEF was ordered to deploy from Camp Lejeune, N.C., and other East Coast bases, arriving by the end of December. The 2d Marine Div., under Maj. Gen. Mike Myatt, brought its 2d, 6th, 8th, and 10th Marines (the latter being artillery), and 4th and 8th Tank Bns. The 5th MEB remained afloat aboard Amphibious Gp. 3 with the 4th MEB, joined by the 13th MEU. Other I MEF units included the 2d RSI Gp., 2d MAW, and 2d FSSG.

Marine Forces, USCENCOM were augmented by

¹ Three MPSs, comprising 4-5 maritime pre-positioned force ships, have been pre-loaded with supplies and equipment and based in key areas since 1985 to support MEB deployments.

Iraqi POWs are unloaded from a 1st Marine Div. 2½-ton cargo truck during the battle of Al-Khafji.

Most of the Marines wear body armour vests with desert camouflage pattern covers. (USMC)

other FMF units and almost 22,000 reservists, most serving in service support units whose strength had proved inadequate. The 90,000 Marines were under Lt. Gen. Walter Bommer, Marine Forces Commander (Ashore). Of these, 17,000 remained aboard the Amphibious Task Gp. fulfilling the unenviable but invaluable task of pinning down thousands of Iraqi troops by the threat of a flanking amphibious assault. There were almost 20 Marine infantry, 11 artillery, four tank, two LAI, and two amphibious assault battalions with 260 howitzers, 106 each M1A1 and M60A1 tanks, 250 LAVs, and 430 amphibious assault vehicles. III MEF stood ready at its bases in Okinawa, Japan, and Hawaii. The British 7th Armd. Bde., and later the 1st (UK) Armd. Div., was attached to I MEF from late October; in January 1991 it was reassigned and replaced by the Army's 1st Bde., 2d Armd. Div., which remained under Marine control throughout the war.

* * *

All US services counted a total of 148 killed in action and died of wounds (all causes) and about 340 wounded. At the time of this writing, approximately 90 US service personnel had died due to non-combat causes (this number continues to climb as US forces are still in the area). Of these, a recent study determined that up to 35 US personnel were killed by friendly fire and 72 wounded, principally because of the night combat and weather conditions.

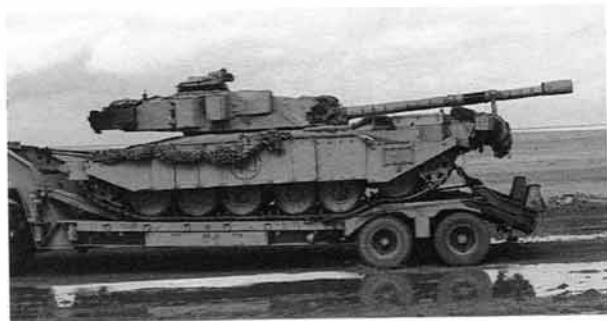
BRITISH FORCES

Britain was the first NATO country to commit substantial forces to the Gulf, with advance detachments deployed to Saudi Arabia within days of the invasion. Signal and medical units were soon arriving to support RAF units. A steady flow of troops and equipment began deploying out of RAF Lyneham by mid-August. Operational commander of the UK Joint Forces was Air Chief Marshal Sir Patrick Hine, operating out of RAF Strike Command at High Wycombe. Lt. Gen. Sir Peter de la Billiere, the most decorated serving British Army officer (and a fluent Arab speaker, thanks to previous service in theatre with 22 SAS Regt.), commanded British Forces Command Middle East's 35,000 ground troops (including 2,000 combat replacements) deployed in support of Operation GRANBY.

The 7th Armd. Bde., carrying the lineage of the 7th Armd. Div., 'Desert Rats', of World War II fame, was directed to deploy on 14 September directly from Germany, shipping out of Bremerhaven. It was attached to the US Marines' I MEF in October. This was followed by the 4th Armd. Bde. (a former brigade of the World War II 7th Armd. Div.) and support units in late November, to form the 25,000-man 1st (UK) Armd. Div.¹, commanded by Maj. Gen. Rupert Smith. Though short a third brigade, the 1st (UK) Armd. Div. was an extremely potent force heavily augmented by combat support units. Its two brigades each comprised three combat battalions/regiments plus Royal Artillery and Royal Engineer field regiments. The UK's modern equipment, coupled with the traditional professionalism of the British soldier, combined to make the British Army's contribution to the war extremely valuable and effective.

The division's three 850-man mech. infantry battalions were each equipped with 45 new FV510 Warrior mechanized combat vehicles (MCV). Developed parallel to similar Western vehicles, it does however lack firing ports for the on-board troops; it nevertheless proved to be an excellent vehicle. It mounts a 30mm L21 Rarden cannon and 7.62mm L94A1 coaxial chain gun in its two-man turret. Passive night vision sighting and driving systems are provided, along with an NBC protection system. Support vehicles (mortar carriers, command vehicles, etc.) are based on the older FV432 Trojan series of tracked carriers.

The battalion's support company has mortar (8 x 81mm L16A1), antitank (24 x Milan ATGM teams, 18 x FV432 APCs), and close recce (8 x Scimitar tracked recce vehicles) platoons. The battalion HQ company provides complete service support. The three rifle companies each



A 14th/20th King's Hussars Challenger Mk 3 of the 4th (UK) Armd. Bde., mounting a 120mm L11A5 gun, is carried to the front by a Leyland Scammell Commander tractor

towing a Crane Fruehauf 55-ton trailer. A plastic garnish desert camouflage net is strapped to the tank's track skirt. (Steve Capps)

have an HQ and three rifle platoons each with four Warrior MCVs, one for each of the three rifle sections and the platoon HQ; with a 51mm L9A1 hand-held mortar. The section's ten men include a Warrior crew of three and a seven-man dismount element.

Section armament includes the new 5.56mm L85A1 individual weapon (SA-80), 5.56mm L86A1 light support weapon, and single-shot, disposable 94mm LAW 80 rocket launchers (replacing the heavy 84mm L14A1 Carl Gustav recoilless rifle). Some support units were still armed with the 7.62mm L1A1 self-loading rifle and 9mm L2A3 sub-machine gun. The standard handgun was the Browning Hi-Power 9mm L9A1 augmented by a few recently purchased Swiss SIG 9mm P226s and the more compact P228.

The tank regiments were equipped with the advanced FV4030 Challenger Mk 3. Though under consideration for replacement and often criticized because of problems with its diesel engine, the Challenger proved itself among the best tanks fielded in the Gulf; a 90% availability rate was maintained. Mounting a 120mm L11A5 gun plus L8A1 coaxial and L37A2 cupola 7.62mm MGs, it also boasts full NBC protection for its four-man crew, and advanced night vision and sighting equipment. Each tank regiment has an HQ squadron plus a close recce troop (8 x Scorpion recce vehicles). Two of the regiments (Royal Scots Dragoon Guards and Queen's Royal Irish Hussars) had four tank squadrons (57 tanks, 670 men), while the 14th/20th King's Hussars had three (43 tanks, 650 men). Squadrons have four tank troops, each with three tanks plus two in the HQ and admin. troop. Organic to mech. infantry battalions and tank and recce regiments is a light aid detachment (LAD) with repair and recovery vehicles plus an enhanced battalion/regimental aid post.

Like their US counterparts, UK mech. infantry batta-

¹ (UK) or (British) was included in the division's designation to prevent confusion with the 1st (US) Armd. Div.

lions and tank regiments are task organized by cross attachment from other units to form a combined arms 'battle group'. For example, a tank regiment battle group might retain two or three tank squadrons and receive a mech. rifle company from the infantry battalion(s) its squadron(s) are attached to. The rifle company would come with mortar and Milan sections. Task organized companies and squadrons are referred to as 'combat teams'. The battle group might also receive a self-propelled howitzer battery and, in the Gulf, an engineer field troop or squadron along with various other support elements from brigade and division.

Two recon units were deployed to the Gulf: the 7th Armd. Bde.'s A Sdn. 1st the Queen's Dragoon Guards, and the divisional recon unit, 16th/5th The Queen's Royal Lancers. The latter had a HQ squadron and three medium recon squadrons with an HQ and admin., three recon (4 x Scimitars), guided weapons (16 x Striker ATGM vehicles), and support (4 x Spartans) troops.

Two types of recon vehicles were used by these units and with the recon platoons/troops of mech. infantry and tank units. The FV101 Scorpion is a full-tracked vehicle mounting a 76mm L23A1 gun, and the FV107 Scimitar has the same 30mm Rarden cannon as mounted on the Warrior MCV. Both of these vehicles use the same chassis and two-man turret with a coaxial 7.62mm MG. They are fitted with NBC protection and image intensification night sights. This chassis provides the basics for a whole range of British Army support vehicles: FV102 Striker ATGM launcher, FV104 Samaritan ambulance, FV105 Sultan command, and FV106 Samson recovery vehicles.

The division's Royal Artillery units were equipped with almost exclusively US-made weapons. Most of the

units were formed by drawing batteries from other regiments. Each armoured brigade had a field regiment with 24 x 155mm M109A2 SP howitzers, plus an AD missile battery with 36 Javelins, while the division's 26th Field Regt. had only 12 x M109A2s. The 32nd Heavy Regt. was equipped with 16 x M109A2s and 12 x 203mm M110A1 SP howitzers, while the 39th Heavy Regt. had 12 x M270 Multiple Launch Rocket Systems (MLRS) — all that Britain possessed.

Royal Engineer field regiments have two field squadrons well equipped for breaching obstacles and minefields, and defeating fortifications. Their equipment includes various armoured engineer vehicles. They are fully trained as combat engineers and can function as infantry when required.

The 4th Regt., Army Air Corps (AAC)¹ deployed with 24 Lynx AH Mk 1 attack helicopters armed with six TOW ATGMs, plus 24 French-designed, British-built Gazelle AH Mk 1 scouts. Cargo helicopters included 16 Puma HC Mk 1s and 11 Chinook HC Mk 1s (retrofitted with US 7.62mm M134 miniguns). These were drawn from the RAF's 7 and 18 Sdns. (Chinook), 33 and 230 Sdns. (Puma), and 240 OCU (both types), and were formed into the Joint Helicopter Support Unit (JHSU). Included with this organization was the Commando Helicopter Operations Support Cell (CHOSC), a Royal Navy unit.

Many of the deployed units were formed by amalgamating the most combat ready elements in the British Army of the Rhine (BAOR); this was especially true of the 4th Armd. Bde. and Divisional Troops. The 7th Armd. Bde. deployed more or less as a complete unit, though it

¹ AAC, formed in 1957, carries the lineage of the World War II Glider Pilot Regt. and RAF Air Observation Post Sdns. AAC squadrons beginning with '6' are old RAF units.

Two 7th (UK) Armd. Bde. soldiers, still wearing European Disruptive Pattern Material (DPM) camouflage uniforms, man L4A4 light (foreground) and L7A2 general purpose MGs in a security outpost early in the deployment. Both weapons are 7.62mm, the former being an upgrade of the Bren gun of World War II fame. (Official)





A close-up of a 4th (UK) Armd. Bde. Challenger's Thermal Observation and Gunnery Sight (TOGS) box displaying a full-colour national flag and this brigade's black desert rat (actually a jerboa) above a black vehicle name. The 7th Armd. Bde.'s similar insignia depicts a red jerboa with its tail curved beneath. (Steve Capps)

too was augmented. The first element of what was to become the 1st (UK) Armd. Div. was the armour-heavy 7th Armd. Bde., forming part of the BAOR's 1st Armd. Div. headquartered in Fallingbommel:

The Royal Scots Dragoon Guards (Carabiniers and Greys), tank regiment reinforced by elements of the 14th/20th King's Hussars, 17th/21st Lancers, and 4th Royal Tank Regt.

The Queen's Royal Irish Hussars, tank regiment reinforced by elements of the 17th/21st Lancers.

1st Bn. The Staffordshire Regt. (The Prince of Wales's), mech. infantry reinforced by elements of the 1st Bn. Grenadier Guards, 2nd Bn. The Royal Anglian Regt., 1st Bn. The Prince of Wales's Own Regt. of Yorkshire, and 1st Bn. The Royal Green Jackets.

40th Field Regt. Royal Artillery — 38, 129, 137 Field, 10 AD Btys.

21 Engr. Regt. — 1 and 4 Field Sdns. reinforced by sappers from 26 Armd. Engr. Sdn. of 32 Armd. Engr. Regt.

A Sdn. 1st The Queen's Dragoon Guards, recce unit (attached to 16th/5th Lancers after the division formed).

7th Armd. Bde. HQ & Signals (207 Signals Sdn.).

1 Armd. Field Ambulance Royal Army Medical Corps.

On 22 November it was announced that an armoured division would be fielded with its additional assets drawn from a variety of BAOR formations. The 1st (UK) Armd. Div. was headquartered in Caithness Barracks at Verden and commanded by Maj. Gen. Rupert Smith. The 4th Armd. Bde., headquartered in York Barracks at Münster, was composed of units drawn from the BAOR 3rd Armd. Div.'s 4th and 6th Armd. Brigades:

14th/20th King's Hussars, tank regiment reinforced by A Sdn. The Life Guards and elements of the 4th Royal Tank Regt.

1st Bn. The Royal Scots (The Royal Regt.), mech. infantry reinforced by Queen's Co. 1st Bn. Grenadier Guards and elements of 1st Bn. Queen's Own Highlanders (Seaforth and Camerons).

3rd Bn. The Royal Regt. of Fusiliers, mech. infantry reinforced by No. 2 Co. 1st Bn. Grenadier Guards and elements of 1st Bn. Queen's Own Highlanders.

2nd Field Regt. Royal Artillery — 'O', 23, 127 Field, 46 AD Btys.

21 Engr. Regt. — 39 Close Spt., 73 Field Sdns.

4th Armd. Bde. HQ & Signals (204 Signals Sdn.).

The 1st (UK) Armd. Div. Divisional Troops were somewhat heavier than found in BAOR divisions:

1st Armd. Div. HQ and Sig. Regt.

Arty. Bde.:

16th/5th The Queen's Royal Lancers, recce regiment.

26th Field Regt. — 16, 17, 159 Field, 43 AD Btys.

32nd Heavy Regt. — 18 and 74 Heavy, 57 Locating Btys.

39th Heavy Regt. — 132, 176 Heavy Btys.

12th AD Regt. — 'T', 58 AD Btys. (Rapier missiles).

4th Regt. Army Air Corps — 654, 659, 661 Sdns.

Div. Engrs.

32 Armd. Engr. Regt. — 31, 77 Armd. Engr., 37 Field Sdns.



A British FV4204 Mk 1 armoured recovery vehicle. Based on the hull and chassis of the Chieftain Mk 5 tank, the ARV is issued to Royal Electrical and Mechanical Engineer recovery units. It mounts a dozer blade, two winches, and other recovery equipment. (Official)

3 Field Sdn., 14 Topographic, 15 and 45 Field Spt., 49 Explosives Ordnance Disposal Sdns.

Prisoner of War Guard Force¹:

1st Bn. Coldstream Guards, 56th (London) Bde.

1st Bn. The Royal Highland Fusiliers (Princess Margaret's Own Glasgow and Ayrshire Regt.), 54th Inf. Bde.

1st Bn. The King's Own Scottish Borderers, 52nd (Lowland) Bde.

1st Bn. Queen's Own Highlanders (Seaforth and Camerons) (lines of communication security)

Armd. Delivery Gp.²:

The Lifeguards (Challenger tanks).

1st Bn. Scots Guards (Warrior MCVs).

The 1st (UK) Armd. Div. also had a wide range of Force Troops in support. *Elements* of the below units are known to have been attached, but this is by no means an exhaustive list:

Joint Helicopter Support Unit.

7th Tank Transport Regt. Royal Corps of Transport.

10th Regt. Royal Corps of Transport — 9, 12, 16, 17, 50, 52 Sdns.

14th EW Regt. Royal Corps of Signals — two units.

17th Maritime and Port Regt. Royal Corps of Transport.

30th Signals Regt. Royal Corps of Signals.

39 Engr. Regt. — 34 Field, 48 and 53 Field Construction Sdns.

1 and 5 Armd. Field Ambulances Royal Army Medical Corps.

16 Field Ambulance Royal Army Medical Corps.

24 (Airmobile) Field Ambulance Royal Army Medical Corps.

22nd and 33rd Field Hospital Gps. Royal Army Medical Corps.



The venerable FV704 Ferret Mk 1/2 light recce vehicle, here mounting an L44 MG, has been in use since 1952. This little vehicle is principally used for liaison duties within infantry and armoured units and for recce in Royal Artillery batteries. Other versions have a

small turret mounting an internal .30-cal. Browning MG. The 4th Armd. Bde.'s red jerboa is painted above the ammo boxes; the jerboa traditionally faces the viewer's right, but some were applied peering left, as this example. (Official)

205 General Hospital Royal Army Medical Corps (Territorial Army).

28 Ambulance Sdn. The Gurkha Transport Regt.

1st and 4th Armd. Div. Transport Regts. Royal Corps of Transport.

3rd, 5th and 6th Ordnance Bns.

¹ Battalions from UK based 'administrative' brigades deployed to guard prisoners.

² Battle loss replacement units which closely followed the division's advance.

British troops wearing No 1 Mk 4 NBC protective suits, in DPM camouflage suits, in DPM camouflage scheme, and S10 NBC respirators. The butyl rubber gloves, Mk 4 boots, and respirator are black though the latter's filter cannister is OG. These items have generally replaced the OG No 1 Mk 3 suit and S6 respirator. (Official)





A 4th (UK) Armd. Bde. warrant officer stencils the red jerboa insignia on the hull of an FV432 Trojan APC; the insignia is shown in detail, right. The brigade patch is a white outlined, rust red jerboa on a black background, worn above a scarlet-over-blue Royal Artillery flash, all on an OG brassard. Though indistinct, the WO's wrist band (anodized brass, OD patch, black band) appears to indicate his rank is regimental quartermaster sergeant. (Official)



6, 7, and 11 Armd. Workshops.
 174 and 203 Provost Cos. Royal Military Police.
 187 and 518 Cos. Royal Pioneer Corps.
 908 Pioneer Labour Spt. Unit.

The 1st (UK) Armd. Div. served with the US Marines around Jubayl until early January when it moved to Saudi Arabia's Eastern Province and was placed under control of VII (US) Corps.

British forces were well prepared for the expected chemical warfare. Besides possessing excellent chemical



defence equipment, teams from the Chemical Centre, Winterbourne Gunner, were sent to train Arab forces. A number of regimental bands were deployed to provide chemical decontamination and medical support — their wartime function.

Special operations forces were represented by a large portion of 22nd Special Air Service Regt. and Special Boat Sdn. Royal Marines, arriving in late August 1990. It is suspected that a handful of SAS troopers with the British Military Assistance and Training Team advising the Kuwaiti Army at the time of the invasion remained in the country reporting intelligence. Other SAS troops are thought to have deployed from Oman and Cyprus. The SAS made extensive use of Land Rover Desert Patrol Vehicles (DPV — 'pink panthers') and Longline Light Strike Vehicles (LSV). The SBS operated with the US Navy SEALs. At least one SAS trooper was killed and seven captured.

British losses for all services were 36 killed, 17 in combat, and 43 wounded. Nine of the combat losses were from friendly fire, along with 13 wounded by the same cause.

FRENCH FORCES

France contributed approximately 12,000 ground troops as part of *Opération Daguet* (Dagger), their support to DESERT SHIELD. The overall commander of French forces was Lt. Gen. Michel Roquajoffre, commander of the Rapid Action Force, France's power projection force. Initially the French forces were committed only to defend Saudi Arabia and it had been stated that they would not participate in any future offensive operations. For this reason French ground and air forces were initially excluded from much of the intelligence information collected by US forces. National opinion soon swayed the National Assembly, and the decision was made to actively take part in the liberation of Kuwait. This was principally due to recollection of the government's decision not to permit US bombers en route to Libya in 1986 to overfly France — an unpopular move to many Frenchmen who wanted their nation to respond more actively to Third World threats.

A 4th (UK) Armd. Bde. transporter bears a FV510 Warrior mechanized combat vehicle (MCV), mounting a 30mm Rarden L21 gun and add-on side armour, and FV432 command vehicle. The plastic maxi-pipe (called

PVC pipe in the US) fascine system, a ditch-crossing aid, is painted sand on black. The command vehicle's pennant is black bordered, with a black desert rat on a white field. (Steve Capps)

Once approval for active participation was granted, the US readily shared information and even permitted American units to be placed under French command. (Not since World War I has an American unit been under French control.)

The overseas deployment of French troops is greatly restricted by law. The French Ground Army (*l'Armée d'Terre*) is principally a conscript force in the Republican tradition. Conscripts can only be deployed overseas with National Assembly consent. For this reason the Rapid Action Force (*Force d'Action Rapide* — FAR) divisions maintain sufficient regiments of professional troops to deploy some overseas. FAR conscripts can be deployed overseas if they sign an agreement; experience has shown that most will. Additionally, non-FAR conscripts receive a relatively low level of training, with most being conducted in the regiment; FAR recruits, however, undergo extensive training prior to assignment to operational regiments.

The main ground formation committed to *Opération Daguet* was the 6th Lt. Armd. Div. (*6^e Division Légère Blindée* — 6^e DLB, sometimes referred to as *Division Daguet*), commanded by Brig. Gen. Mouscardes. Based at Nîmes on the French Riviera, it is one of five divisions subordinate to the FAR. French divisions are small compared to their NATO counterparts, being usually the size of reinforced brigades heavily reliant on corps-level support units. The 6^e DLB was deployed almost in its entirety, with the exception of its 68th Arty. Regt.; but was heavily augmented by other FAR assets, absorbing much of the 4th Airmobile (*4^e Div. Aéromobile* — 4^e DAM) plus elements of the 11th Prcht. (*11^e Div. Parachutiste* — 11^e DP) and 9th Marine Divisions (*9^e Div. Marine* — 9^e DM). The first units arrived in Yanbu, Saudi Arabia, in late September 1990, though a token antitank squadron had arrived in late August. Reinforcement units arrived in mid-December. Initially, the 6^e DLB was based at Hafar al Batin southwest of the Saudi-Kuwaiti-Iraqi border juncture, and worked with Arab forces until January. It was then attached to the XVIII Abn. Corps and, reinforced, by the 2d Bde., 82d. Abn. Div., was used to screen the coalition's west flank, which entailed securing the Al-Salman air base deep in Iraq.

The 6^e DLB's augmentations increased the formation to 11,000 men, plus 3,000 support troops, providing a combined arms force well suited to its flank security mission. The information below includes the units' function, parent formation, and home station. The early arriving units included:

1st Spahis Regt. (*1^{er} Régiment de Spahis* — 1^{er} RS), recon. unit, 6^e DLB, Valence.
 1st Foreign Legion Cav. Regt. (*1^{er} Régiment Etranger de Cavalerie* — 1^{er} REC), recon. unit, 6^e DLB, Orange.



Warrior MCV '31' displays the symbol of 1st Bn. The Staffordshire Regt., a yellow knot (derived from the 'Staffs' cap badge) on a black pennant. The crewmen wear the new 'desert combats'. A local

variant (stencilled on the front quarter of some Warrior turrets) displayed a black palm tree with the 'Staffs' knot centered on the trunk — reminiscent of the Afrikakorps insignia. (Official)

2nd Foreign Legion Inf. Regt. (*2^e Régiment Etranger d'Infanterie* — 2^e REI), mech. infantry, 6^e DLB, Nîmes.

2nd Marine Inf. Regt. (*2^e Régiment d'Infanterie de Marine* — 2^e RIMa), mech. infantry, 9^e DM, Le Mans.

3rd Marine Inf. Regt. (*3^e Régiment d'Infanterie de Marine* — 3^e RIMa), mech. infantry, 9^e DM, Vannes.

13th Prcht. Dragoon Regt., elements (*13^e Régiment de Dragons Parachutistes* — 13^e RDP), LRRP unit, 1st Army, Dieuze.

1st Marine Prcht. Inf. Regt., elements (*1^{er} Régiment Parachutiste d'Infanterie de Marine* — 1^{er} RPIMa), special operations unit, 11^e DP, Bayonne.

11th Marine Arty. Regt. (*11^e Régiment d'Artillerie de Marine* — 11^e RAMa), 155mm guns, 9^e DM, La Lande d'Oqée.

35th Prcht. Arty. Regt., AD Battery only (*35^e Régiment d'Artillerie Parachutiste* — 35^e RAP), Mistral AD missiles, 11^e DP, Tarbes.

6th Foreign Legion Engr. Regt. (*6^e Régiment Etranger du Génie* — 6^e REG), mech. combat engineers, 6^e DLB, L'Ardoise.



A 1st Bn., Staffordshire Regt. Warrior MCV section undergoes kit inspection of their considerable quantity of on-board gear. This is the same vehicle pictured in the previous photograph, thus providing complete details on the numbering system used, at least within this specific company. (Official)

1st Combat Helicopter Regt. (*1^{er} Régiment d'Hélicoptères de Combat* — 1^{er} RHC), antitank helicopters, 4^e DAM, Metz.
3rd Combat Helicopter Regt. (*3^e Régiment d'Hélicoptères de Combat* — 3^e RHC), antitank helicopters, 4^e DAM, Phalsbourg.

17th Command and Spt. Regt. (*17^e Régiment de Commandement et de Soutien* — 17^e RCS), elements provided main logistical support, FAR, St. Germain-en-Laye.

6th Command and Spt. Regt. (*6^e Régiment de Commandement et de Soutien* — 6^e RCS), logistical support, 6^e DLB, Nîmes. Augmented by 7th Prcht. Command and Spt. Regt. (7^e RPCS) elements from 11^e DP.

Air Delivery Group (*Groupe de Livraison par Air* — GLA), elements.

National Military Police (*Gendarmerie Nationale*), elements.

The reinforcement units arriving in December consisted of companies/squadrons detached from their parent regiments:

1st Prcht. Hussar Regt., two squadrons (*1^{er} Régiment de Hussards Parachutistes* — 1^{er} RHP), light recon. unit, 11^e DP, Tarbes.

Marine Inf.-Tank Regt. (*Régiment de Infanterie-Chars de Marine* — RICM), two squadrons, recon. unit, 9^e DM, Vannes.

1st Inf. Regt., two companies (*1^{er} Régiment d'Infanterie* — 1^{er} RI), airmobile infantry/antitank unit, 4^e DAM, Sarrebourg.

21st Marine, Inf. Regt., two companies (*21^e Régiment d'Infanterie de Marine* — 21^e RIMa), mech. infantry, 6^e DLB, Fréjus.

4th Dragoon Regt. (*4^e Régiment de Dragons* — 4^e RD), complete tank unit, 10th Armd. Div., Camp de Mourmelon.

17th Prcht. Engr. Regt., two companies (*17^e Régiment de Génie Parachutiste* — 6^e REG), combat engineers, 11^e DP, Montauban.

28th Communications Regt. (*28^e Régiment de Transmissions* — 28^e RT), two EW companies, FAR, Orléans.

French regiments are battalion-sized units, regardless of the branch of service. Combat regiments consist of an HQ (*Etat-Major*), command and support company/squadron (*compagnie/escadron de commandement et de soutien*), and usually four combat companies/squadrons with three to five platoons (*sections*). Company-size armour, cavalry, and aviation units are referred to as squadrons.

The recon. regiments (1^{er} RS and 1^{er} REC) are multi-role units capable of performing offensive actions and are well equipped for antitank operations, relying on their relatively heavy firepower and high-speed mobility. Indeed, they are the armour of the French light armoured divisions and other light units. These units comprise three recon. squadrons with 12 x AMX-10RC armoured cars with three in each of the four platoons plus three VAB APCs in the HQ. The antitank squadron has 12 x VCAC/Hot-Mephisto antitank vehicles. The AMX-10RC is a 6 x 6 vehicle armed with a 105mm gun with a four-man crew. It is a relatively modern vehicle, with a laser rangefinder and low-light level TV night vision and sighting system; a number of other fire control accuracy enhancements are incorporated. It also includes NBC protection and is amphibious. The VCAC/HOT is the antitank version of the 4 x 4 VAB APC (described below) armed with four HOT 2 ATGMs.

The two 1^{er} RHP recon. squadrons were equipped with Panhard ERC-90 F4 Sagaie (*Engin de Reconnaissance Cannon*) armoured cars with three in each squadron's four platoons. This 6 x 6 vehicle mounts a 90mm gun; similar in

layout to the AMX-10RC, it lacks such refinements as NBC protection and advanced sighting systems. Each platoon also has a 4 x 4 Peugeot P4 light truck transporting a Milan ATGM team.

The infantry regiments were each organized differently reflecting their specialized missions. The Foreign Legion's 2^e REI has a command and service and four mech. infantry companies, each with an HQ (2 x VAB APCs), three rifle platoons (3 x VABs) plus antitank (1 x VAB, 2 x Milan ATGM teams), antiaircraft (2 x 20mm 53T2, 2 x VABs), and mortar (2 x 81mm MO-81-61C mortars, 2 x VTMs) platoons. The 2^e REI also had 12 x 120mm MO-120-RT-61 mortars. The *Troupes de Marine* of 2^e and 3^e RIMA are Army troops and not marines in the usual sense, being renamed units of the Colonial Army. The RIMA has a command and service company, heavy weapons company (recon., antitank, and mortar platoons), and four infantry companies. These are similar to those of the 2^e REI, to include the three VAT-mounted rifle platoons, but have only a single weapons platoon with 2 x 81mm MO-81-61C mortars, 2 x 20mm 53T2 AD guns, and 4 x VABs.

The 1^{er} RI is a one-of-a-kind airmobile tank-killing unit assigned to the 4^e DAM. Its two deployed scout/antitank companies had 16 Milan ATGM teams each. It is thought that some of the reinforcements were formed into a composite unit, the Mixed Armd.-Inf. Regt. (*Régiment Mixte Infanterie-Blindés* — RMIB), with two VAB-equipped companies of the 21^e RIMA and two AMX-10RC squadrons of the RICM.

The rifle platoons of the different mech. regiments are organized generally the same. Rifle squads have ten men armed with 5.56mm FN MAS assault rifles, a 7.5mm FR-F1 sniper rifle, a 7.62mm AA52 light MG, and an 89mm LARC F1 antitank rocket launcher. The FAMAS rifles can fire 58mm grenades and are used in lieu of a single-shot disposable LAW. Additional LARC F1s are issued to platoon HQs in some units.

The Renault VAB (*Véhicule de l'Avant Blindé*) APC is an amphibious 4 x 4 vehicle used by light mechanized units rather than the full-tracked AMX-10P ICV used in heavy units. Surprisingly, none of the new AMX-10Ps (not to be confused with the wheeled AMX-10RC armoured car) were deployed to the Gulf for combat testing. The VAB possesses an NBC protection system, night vision equip-

ment, and mounts a US .50-cal. M2 MG. The squad can fight mounted using eight firing ports. VAB variants are also used for a number of other purposes including mortar carrying and towing (VTM), HOT and Milan ATGM carriers (VCAC), command (VAB PC), and various support vehicles.

The 4^e RD is a tank regiment assigned to the 10th Armd. Div., a non-FAR formation, but manned by professional troops permitting overseas deployment, and augmented by elements of the 503rd Combat Tank Regt. (*503^e Régiment de Chars de Combat* — 503^e RCC). It fielded 44 x AMX-30B2 tanks in four squadrons, each with four platoons of three tanks plus one in the squadron HQ. The AMX-30B2, though an upgraded version of the elderly AMX-30, is not considered one of the premier Western European main battle tanks, but is more capable than most Iraqi tanks (it is scheduled to be replaced by the AMX-40 Leclerc). It mounts a 105mm F1 gun and a unique coaxial 20mm F2 cannon. The tank is equipped with NBC protection, laser rangefinder, ballistic computer, and low-light-level TV sighting.

The French have traditionally been lean on artillery and the 6^e DLB's artillery support was no less so; elements of the 18th (US) FA Bde. were attached. The 11^e RAMA fielded three six-gun batteries of 155mm TR-F1s; though towed by a Renault truck, this weapon also has an auxiliary engine providing limited mobility. The guns are linked together by the Atila fire control and inertial navigation system, which coupled with their mechanical loader (first three rounds fired in 15 seconds), are able to provide rapidly responsive support. The 35^e RAP is equipped with 105mm howitzers and 120mm mortars, but deployed only an AD Battery with M162 Mistral man-portable missiles. The 11^e RAMA also deployed its Mistral AD Battery. Both units were augmented by US-made Stingers.

The Foreign Legion's 6^e REG provided the 6^e DLB's

A US-made 155mm M109A2 SP howitzer of the 7th (UK) Armd. Bde.'s 40th Field Regt.; a 12.7mm LIA1 (US .50-cal. M2) MG is mounted at the commander's hatch. The

eight-man crew's kit is secured to the turret sides. M109 variants were used by most of the coalition forces, making it virtually an international standard weapon. (Official)



combat engineer support in the form of four mechanized engineer companies plus reinforcement by two 17th RGP companies. Completely mounted in VAB APCs, they were also equipped to fight as infantry. Some XVIII (US) Abn. Corps engineers were also attached.

The two combat helicopter regiments were augmented by elements of the 5^e RHC. The most numerous Ground Army Light Aviation (*Aviation Légère de l'Armée de Terre* — ALAT) helicopters were the Gazelle, fielded in two versions, the SA-342 with 4 x HOT ATGM launchers and the SA-341 with a 20mm cannon. Puma SA-330s, used as scouts, also mount a 20mm. The two RHCs each had 62 Gazelles and Pumas.

Elements of two special operations units were also deployed. The 13^e RDP is the French Army's LRRP unit. Only a small number (probably a squadron) of its 60 five-

man teams were committed. Three Dragoons were apprehended inside Iraq in November, but released. The 1^{er} RPIMA is trained and equipped as a commando unit and had elements in-place to perform counter-terrorism or other special missions.

The French forces suffered three men killed in combat.

ARAB LEAGUE FORCES

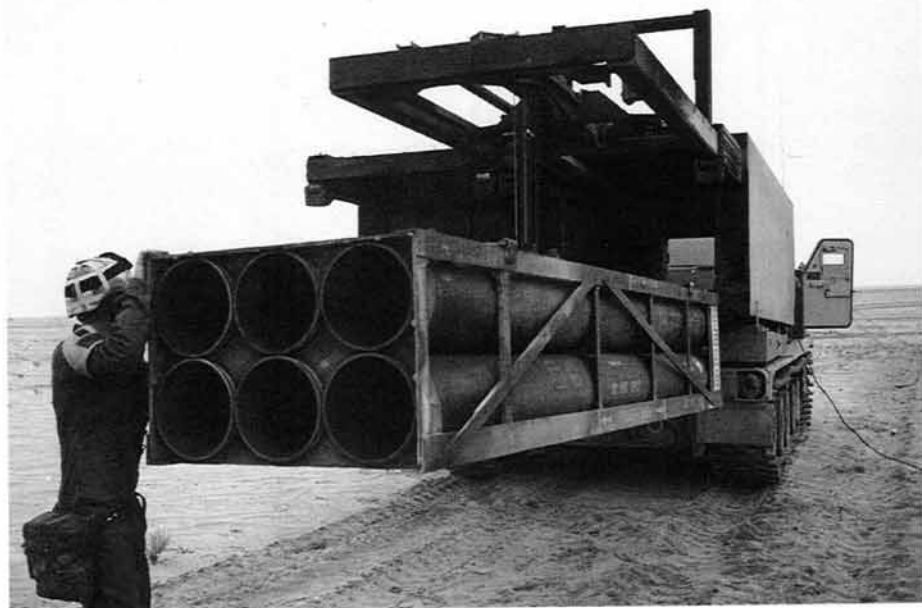
The Gulf Co-operation Council (GCC) was formed in 1981 as a mutual defence effort, principally for fear of Iran, by Bahrain, Kuwait, Oman, Saudi Arabia, and the United Arab Emirates (UAE). One GCC initiative was the Saudi-led 20,000-man rapid deployment Peninsula Shield force headquartered in Hafr-al-Batin, Saudi Arabia, and contributed to by all members. The Arab League, comprising the GCC states and 21 other Arab nations, was split over the Iraq-Kuwait question, but 14 members voted not to recognize the Iraqi annexation of Kuwait and joined with the coalition.

An area of concern for the coalition command was that the corps-size Joint Forces Command North (JFCN), consisting of Egyptian, Syrian, Saudi and Kuwaiti units, were highly susceptible to fratricide due to the Soviet and variety of other foreign combat vehicles used by these nations. However, not a single friendly fire attack was reported by



Two 16th/5th The Queen's Royal Lancers FV107 Scimitar recon vehicles, mounting 30mm Rarden guns, of the 1st (UK) Armd. Div.'s recon regiment are hauled to the front by a makeshift transport. (Steve Capps)

A crewman of a US-made M270 Multiple Launch Rocket Launcher (MLRS) of the UK 39th Heavy Regt. RA unloads an expended 227mm rocket pod. OG one-piece fire retardant tanker's coveralls are worn. On the sand-colour brassard a scarlet-over-blue RA flash is worn above black-on-OG sergeant's chevrons. (Crown Copyright)



Arab forces. Lt. Gen. Prince Khaled bin Sultan (the Saudi defence minister's son) was the nominal commander of all foreign troops operating in the theater.

While the Arab forces' casualties were not heavy, they included 44 Saudi and 56 other Arab coalition dead, most of the latter being suffered by Egyptian and UAE forces. Though Kuwaiti troops took very light casualties during their country's liberation, it is not accurately known how many were lost during the Iraqi invasion. (This, of course, does not include the thousands of Kuwaiti citizens executed by firing squads or randomly murdered. Thousands of others were taken as hostages and moved to Iraq.) Besides Kuwaitis, the only Arab troops taken prisoner were 20 Saudis.

Saudi Arabia

The Kingdom of Saudi Arabia, as the leader of the anti-Iraq Arab League states, was to play a major role in the Gulf War. Besides providing fuel, water, base facilities and a wide range of services to much of the coalition, the Kingdom's armed forces were to assume leadership of the Arabian Peninsula Shield Forces which comprised the coalition's Arab military contributions. Saudi Arabia, as leader of the GCC, had taken the bold step of requesting US and other Western intervention in response to the invasion of Kuwait.

The lavishly equipped and fairly well trained Royal Saudi Land Forces (RSLF) consisted of about 38,000 ground troops. Conscription was authorized, but the RSLF was made up of three-year volunteers led by a professional officer corps (though many of the senior officers

owed their appointments to family connections). The RSLF's only combat experience was by small contingents involved in the 1967 and 1973 wars with Israel. After the invasion the reserves were called up and limited conscription began. The core of the RSLF are its two armoured brigade groups: the US-equipped and trained 4th King Fah'd Bde. Gp., and the French-equipped and trained 12th Khalid bin Waleed Bde. Gp. Both units are based at Tabuk, home of the armoured and airborne schools. (Interestingly, the 12th Bde. Gp. had been completely manned by contracted Pakistani troops in 1980-88). The RSLF has four mechanized brigade groups including the 8th and 20th.

The armoured and mech. brigades possess 258 US M60A3 and 290 French AMX-30S tanks, along with over 800 M113A1 APCs and variants, plus 350 full-tracked AMX-10P ICVs, supplemented by 130 French Panhard M3 4 x 4 APCs. Brigade recon. companies are equipped with some 200 Panhard AML-60 and -90 4 x 4 recon. vehicles armed with 60mm mortars and 90mm guns respectively. Wheeled support vehicles are primarily US-supplied.

The armoured and mech. brigade groups are large, the former with three tank regiments (battalions organized into company-size squadrons and platoon-size troops) and a mech. infantry battalion, and the latter with a reverse mix. They also possess SP artillery, ATGM, combat engineer, supply and transport, electrical and mechanical engineer, and medical battalions plus recon., MP, signal, and ordnance companies.

Special purpose units include an airborne brigade with two parachute battalions and three special forces

Members of a Royal Air Force Regt. field squadron patrol an air base in a 1/4-ton Land Rover One-Ten. The men in the back are armed with L85A1 individual and L86A1 light support weapons; the front gunner mans an L7A2 MG. The troopers wear European DPM uniforms with black-on-OD slip-on shoulder strap slides inscribed 'RAF REGT'. In the background is a Tornado ADV. (Crown Copyright)





The complexities of moving and supporting a modern armoured formation are demonstrated here by only a small portion of the 1st (UK) Armd. Div. as it

prepares for Operation DESERT SABRE. In the foreground is part of a logistics column, while behind it is an armoured regiment battle group. (Crown Copyright)

companies, plus the three-battalion Royal Guard Regiment. The Navy possesses a 1,200-man, three-battalion naval infantry regiment with 140 Spanish BMR-600P 6 x 6 amphibious IFVs. There is also a truck-borne infantry brigade.

Besides artillery battalions assigned to the brigade groups there are five independent battalions, giving the RSLF over 500 pieces of modern artillery. The armoured and mech. brigades are equipped with over 200 US 155mm M109A1 SP howitzers. There are also a number of other 155mm pieces, including US M198 and British FH-70 towed howitzers, and French GCT SP guns. Some 100 US 105mm M101 and M102 howitzers are also held, while the airborne brigade uses Italian 105mm M56 pack howitzers. A small number of very effective Brazilian 127mm Astros II MRLs, originally ordered by Iraq, were delivered to the Saudis.

Most of the many modern air defence missile and gun systems are organized into 33 batteries as part of the Air Defence Force, a service branch independent of and equal to the other branches. French equipment includes Shahine missile systems (six missiles on an AMX-30 chassis), Crotales P4R missile systems (four missiles on 4 x 4 vehicle), and twin 30mm AMX-30SA SP guns. US systems include

Improved Hawk missiles and 20mm M163 SP Vulcans. Both Redeye and Stinger shoulder-launched missiles are used by the RSLF along with some older AD guns.

The National Guard is a separate organization under the RSLF, trained since the mid-1970s by the Vinnell Corp, a contracted firm staffed by former US Army officers and NCOs. It comprises 10,000 regulars backed by 20,000 reservists and 26,000 irregulars, all Bedouins. The regulars are formed into eight mech. combined arms and 16 infantry battalions, making up two mech. infantry brigades (four battalions each), plus four four-battalion infantry brigades. The irregulars make up about two dozen light infantry battalions, ideal for scouting remote border areas. The mech. units use 240 US V-150 Commando 4 x 4 APCs and 105mm M102 howitzers.

Infantry weapons include Austrian 5.56mm AUG rifles and AUG/HRAR squad automatic weapons, and German 5.56mm H&K G-33E rifles and 9mm H&K MP5 submachine guns. Older small arms are still in use such as Belgian 7.62mm FAL rifles and Italian 9mm Beretta M12 submachine guns. Mortars include 81mm US M29s and UK L16A1s along with US 4.2 inch M30s. Carl Gustav 84mm, US 90mm M67, and 106mm M40 recoilless rifles are used along with TOW, Dragon, and HOT ATGMs. A new weapon, the French APILAS (Armour Piercing Infantry Light Arm System), a single-shot disposable LAW, proved to be extremely effective.

The Saudi 4th Armd. and 20th Mech. Bdes., along with two Kuwaiti brigades, formed the Saudi-led Khalid Division, which served under the Saudi-led JFCN alongside Egyptian and Syrian divisions. Other Saudi brigades

An NCO's right arm brassard of 10 (Assaye) AD Bty., 40th Field Regt. Royal Artillery worn with 'desert combats'. From the top: black-on-OG battery patch (there are four traditional batteries within 40th Field Regt.); rust red jerboa, outlined in white, on black, 7th Armd. Bde. patch; scarlet-over-blue Royal Artillery flash, and black-on-OG sergeant's chevrons. (Maj. J. K. Tanner)



A khaki brassard of 32 Armd. Engr. Regt. Royal Engineers. This unit was equipped with a wide range of 'funnies' — specialized combat engineer vehicles dedicated to obstacle breaching. From the top: blue-on-red regimental title; regimental patch (formerly worn by the World War II 79th Armd. Div., also equipped with 'funnies') with black bull's head with white highlights and red horns on a black-edged yellow background; and white-on-khaki lance-corporal's badge. (Soldier Magazine)



served in the Saudi-led division-size Joint Forces Command East (JFCE) with the Qatari brigade on the coast.

Since the war, Saudi Arabia has returned to its previous cautious stance on defence questions. However, it led the proposal for the establishment of a 100,000-man pan-Arab peacekeeping force on its soil. The force's core was to be provided by Egypt and Syria backed by other GCC forces. Egypt announced in May 1991 that it would withdraw its forces by August, stating that their mission was completed. It is now doubtful the force will ever be formed.

Kuwait

The State of Kuwait had been investing almost one and a half billion US dollars yearly in its defence — a massive sum for so small a country, even taking into account its considerable oil-generated gross national product. Its well-equipped army and elaborate surveillance facilities failed to impede or even detect the impending invasion. Kuwait's previous aid to Iraq during the Iran-Iraq War, provided for fear that Iran might prevail and threaten the Emir's borders, also failed to deter its aggressive neighbour.

Prior to the invasion, the Kuwaiti Army was composed of a mech. infantry and two armoured brigades backed by an artillery brigade. Its 16,000 principally conscripted troops were led by a British-trained professional officer corps. Kuwait also possessed a small National Guard comprising the Emir (palace) and Border Guards, equipped with US V-150 and V-300 Commando armoured cars, plus an 18,000-man National Police. The Navy possessed two

marine commando battalions; of which some 100 worked with the US Navy SEALs.

The five battalion-size tank regiments were equipped with 143 UK Chieftain Mk 5/2K and 70 Vickers Mk 1 tanks with 120mm and 105mm guns respectively. The six battalion-size mech. infantry regiments relied on 231 US M113 APCs and 130 UK Saracen FV603 6 x 6 APCs. Some 56 M901 ITVs, based on the M113, equipped brigade antitank companies. Brigade recon. squadrons employed 100 Saladin FV601 Mk 2 6 x 6 armoured cars and some old Ferret scout cars.

Kuwait boasted a modern artillery force with 80 French AMX Mk F3 and 18 x M109A 1B 155mm SP howitzers formed into three battalions for the armoured and mech. brigades, and the remainder in the artillery brigade's multi-battalion SP regiment along with a Soviet FROG-7 missile battalion. Air defences were provided by Improved Hawks and Soviet SA-6, 7, and 8 SAMs; the Kuwaitis were arranging to purchase more modern Soviet SAM systems prior to the invasion. This acquisition has since lapsed due to the poor performance of the Iraqis' Soviet SAMs.

Small arms were predominantly of British origin, including the FN 7.62mm L1A1 rifle, 9mm L2A3 Sterling submachine gun, and 7.62mm L7A2 general purpose MG. These weapons, plus US-supplied arms, equipped the Free Kuwaiti forces. ATGMs included US TOWs and French HOTs plus Carl Gustav 84mm recoilless rifles.

The events of 2 August caught the Kuwaiti armed forces completely off-guard, with little or no effective defensive preparations undertaken. Kuwaiti units did resist,

but this was ineffectual and attempted by only scattered units without central co-ordination or support. Some managed to resist for up to four days but, outnumbered 26 to 1, the small Kuwaiti Army was hopelessly outclassed. The Iraqi attack was so swiftly executed that many units never left their motor pools. The Emir Guard did put up a stiff resistance to cover the royal family's helicopter escape to Saudi Arabia. Only splintered elements of units were able to flee to their southern neighbour, and little equipment accompanied them. Kuwaiti sources claim that 4,200 armed forces personnel were killed and 12,000 interned. Some Kuwaiti troops remained behind to form the core of the resistance movement and were able to distribute arms and ammunition.

The Kuwaiti Army in exile was a mere shell of its former self. Initially, the 5,000-plus remaining troops were formed into two understrength brigades. Other Kuwaiti troops later managed to infiltrate the occupied country and rejoin their forces. The 35th *Shid* (Martyr's) Armd. Bde. was formed of 30–40 surviving Chieftain and Vickers tanks and some M113 APCs with virtually no artillery. Apparently the few remaining Vickers were withdrawn from service and supplemented by British-supplied Chieftains to bring the total to about 80. In 1989 Kuwait purchased 200-plus M-84 tanks from Yugoslavia — upgraded T-72Ms built under Soviet licence. Kuwait had also ordered 245 BMP-2 IFVs from the USSR, some of which had been delivered. Fortunately, 80 M-84s were ready for delivery and the shipments were diverted to Dharan, Saudi Arabia; training teams quickly prepared the crews and the new tanks were issued to the tank regiments. The regi-

ments' squadrons consisted of 10 tanks organized into mixed troops with three M-84s or Chieftains. Additionally, M113 APCs and support vehicles were provided from RSLF and US stocks. Other brigades were formed; their designations and assignments often conflicting in different sources. The best known of these was the *Al Fatah* (The Opening or Liberation) Bde., a light motorized infantry force. About two dozen SA-332K and 342K Gazelle HOT ATGM-armed helicopters were able to flee Kuwait along with ten SA-330K Puma transports, and were formed into a unit.

In September, US Special Forces began training the first of five small Kuwaiti light infantry brigades including the *Shaheed*, *Al-Tahrir*, *Haq* and *Khubid*. These were formed from 7,000-plus enthusiastic refugees and students returning from abroad, backed by Kuwaiti Army cadres. In the States, the US Army began training 262 Kuwaiti students at Ft Dix, N.J., to assume some of these units' junior leader positions and as interpreters for US forces. These brigades were used for rear area security and clearing Kuwait City and other built-up areas. One of them, the Independence Bde., followed the Khalid Div. into Kuwait City in its machine gun-armed pick-ups and commercial trucks. USSF also provided training to the two regular brigades in mine clearance and urban combat.

Egypt

Next to Saudi Arabia, Egypt was to provide the largest Arab contingent in a move that was to solidify Arab League resolve and did much to strengthen the coalition. While looked upon favourably by the West, the decision caused a



A French Renault VRB APC with the sand and blue-grey desert camouflage; others used dark brown as the second colour. A spare tyre, always a frequent casualty in the desert, is lashed to the top. (Official)

Invasion of Kuwait:

- 1: Iraqi Republican Guard
- 2: Tank Officer, Iraqi RG
- 3: Kuwaiti infantryman
- 4: Officer, Kuwaiti SF





US build-up:

- 1: 2nd Lt., 27th Engr. Bn. (Abn.)
- 2: Sniper, 82nd Abn. Div.
- 3: MLRS crew chief, 1st Cav. Div.
- 4: MG gunner, USMC 7th MEB
- 5: Capt., 1st COSCOM





Allied build-up

- 1: Caporal-chef, 1^{er} REC (Fr.)
- 2: Caporal, 1^{er} Spahis (Fr.)
- 3: Troop commander, QRIH (Brit.)
- 4: Corporal, RSDG (Brit.)



1st (UK) Armd. Div.:

1: 2nd Lt., 2 Fd. Regt. RA

2: Sgt., mechanized infantry

3: Troop commander, 1 QDG

4: L/Cpl., RSDG, CO's tank

5: Combat clothing insignia – see plate commentaries

5 a



5 b



5 c



5 d



Division Daguet:
1: Gunner, 11^e RAMa
2: Caporal-chef, 3^e RIMa
3: AD gunner, 35^e RAP

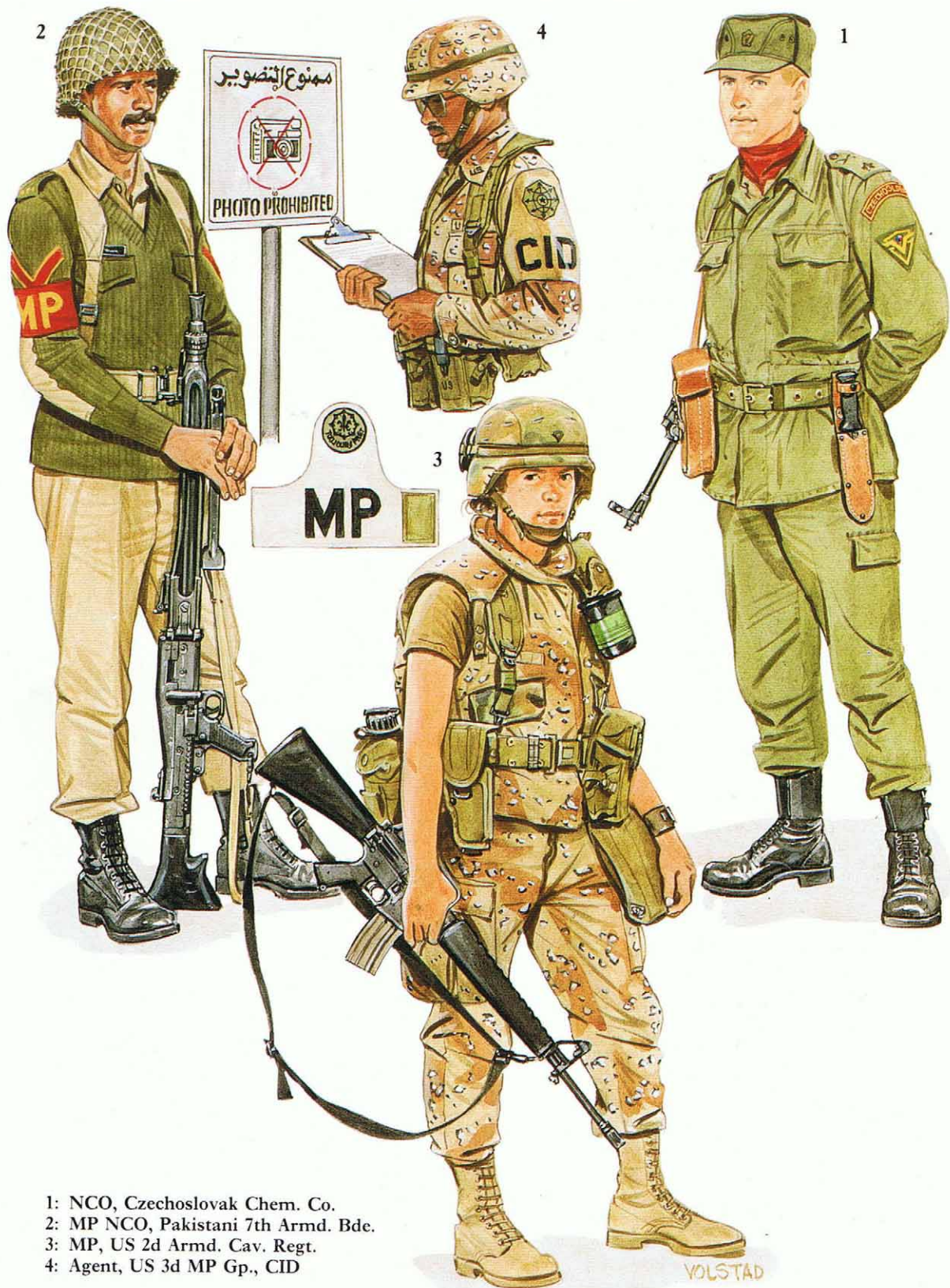




1: Infantryman, 3rd Mech. Div. (Egypt)
2: Tank NCO, 4th Armd. Div. (Egypt)
3: Captain, 4th Cdo. Bde. (Syria)
4: Tank crewman, 9th Armd. Div. (Syria)



- 1: Infantry NCO, 20th Mech. Bde.
- 2: Tank NCO, 12th Armd. Bde. Gp.
- 3: Staff major, C'I Centre
- 4: Infantryman, National Guard
- 5: Nat. Gd., King Abdul Aziz Bde.



1: NCO, Czechoslovak Chem. Co.
 2: MP NCO, Pakistani 7th Armd. Bde.
 3: MP, US 2d Armd. Cav. Regt.
 4: Agent, US 3d MP Gp., CID

VOLSTAD



1: Grenadier, US 101st Abn. Div.
2: NCO, USMC 1st Tank Bn.
3: Sniper, US Special Forces

4: Squad leader, US 3d Armd. Div.
5: SAW gunner, US 24th Inf. Div.



Iraqi Army:
1: MP, Kuwait City
2: Mech. infantryman, RG
3: Infantryman



Coalition aviation:

1: 4th Regt., AAC (Brit.)

2: 3^e RHC (Fr.)

3: Canadian helicopter pilot

VOLSTAD

1

3

2

Kuwait, 24 Feb. 1991:
1: US Marine infantryman
2: Kuwaiti interpreter
3: Iraqi infantryman



French AMX-30B2 tanks of the 4th Dragoon Regt. awaiting delivery to the unit. All are base-painted sand, but with either blue-grey or dark brown disruptive bands, actually ill-suited for the deep western Iraqi desert. A 20mm F2 cannon is mounted coaxially beside the 105mm F1 gun. (Official)



violent public outcry in some parts of the country, though most citizens supported the move. After his long series of tragic wars with Israel, the Egyptian soldier had not seen combat since 1973, but some senior officers were battle-experienced. The Egyptian soldier, led by professional officers, is fairly well trained and equipped.

Egypt deployed two of its 12 divisions, the first arriving between the end of September and early October. This first increment consisted of the 3rd Mech. Div. (sometimes erroneously reported as the 7th), parachute troops, commandos, and chemical defence units. This force was followed by the 4th Armd. Div. in December. In all, 36,000 troops were deployed to Saudi Arabia and another 2,500 support troops to the UAE. Most were flown to Saudi Arabia by Egyptian C-130s and the equipment shipped via the Saudi Red Sea port of Yanbu. Under the corps-level command of Maj. Gen. Mohammed Atia Halabi, the force was subordinate to the Saudi-led JFCN.

The 3rd Mech. Div. consisted of the 8th Tank and 11th and 12th Mech. Bdes.; the 4th Armd. Div. had the 6th Mech. and 2nd and 3rd Tank Brigades; both had fought in the 1973 war with Israel. They had an SP artillery regiment and recon., antitank, AD, and engineer battalions plus support units. Though the Egyptians use predominantly Soviet armour, these two divisions are completely equipped with US M60A3 tanks and M113A2 APCs (and support variants); the 3rd Mech. held about 200 M60A3s, 4th Armd. about 250, and each division had approximately 300 M113s and some M901 ITVs. Two notable M113 variants were also used. The 4.2-inch M106A2 mortar carrier was modified to mount the Soviet-designed, Egyptian-made 120mm M-1943. M113A2s were also modified with a French-designed turret mounting the Soviet-designed, Egyptian reverse engineered guns of the 23mm ZU-23M

twin AD gun and four *Sakr Eye* (Eye of the Falcon), Egyptian-made up-dates of the Soviet SA-7. The *Sakr Eye* is also the standard shoulder-fired AD missile.

The two divisions were equipped with US 155mm M109A2 SP howitzers. In the early 1980s Egypt reverse engineered the Soviet 122mm D-30 howitzer and Chinese 130mm Type 59-1 gun (itself a copy of the Soviet M-46). Both of these towed weapons, known as the D-30M and M59-1M respectively, equip non-divisional artillery units, the latter being an effective counterbattery piece. Some Soviet designed, locally improved variants of the 122mm *Sakr* (Falcon) MRLs were also deployed.

The Egyptian special purpose force contribution is somewhat nebulous. It has been described variously as special forces, para-commando, and airborne. Egypt possesses a confusing array of such units. The 5th Prcht. Bde., augmented by a non-airborne 1,000-man, four-battalion commando group — referred to as *As-Sai'qa* (Lightning) units — probably made up this force. They were used to screen JFCN's western flank.

Egypt uses exclusively locally made, Soviet-designed squad weapons: AKM and AKMS assault rifles, RPD light and SGM medium MGs, and RPG-7 rocket launchers. An upgraded version of the Soviet Tokarev TT-33 pistol, the 9mm Tokagyp, was made in Egypt. US .50 cal. M2 MGs are mounted on M60A3s and M113s. French Milan ATGMs are used along with TOWs, HOTs, and some older Soviet models, Swatter and Sagger.

Syria

While moderate Egypt's participation in the Gulf War came as no real surprise, hard-line Syria's co-operation with its longtime enemies, the US and Britain, stunned many commentators. Some violent demonstrations



A French Marine Infantry 120mm MO-120-RT-61 rifled mortar crew pose at action stations behind their VTM mortar-towing vehicle, a variant of the VAB APC. (Official)

protesting the move took place, but were brutally suppressed. The first 1,000-plus troops arrived before the end of August, and Syrian heavy equipment was shipped through the Suez Canal and Red Sea. Like Egypt, Syria has long been in conflict with Israel, having last fought her in 1982; subsequent combat experience was gained during the continuing struggle in Lebanon. Equipped entirely with Soviet weaponry, organized along Soviet lines, and the creation of a totalitarian state, the Syrian Army bears a closer resemblance to the Iraqi Army than it does to its coalition allies. A total of 19,000 troops were committed to Saudi Arabia and placed under command of JFCN; another 50,000-plus troops were deployed near Syria's border with Iraq. Syrian enlisted men are drafted for a 30-month period and serve under a professional officer and NCO corps.

Some 15,000 of these troops were in the 9th Armd. Div., formerly an infantry division which fought in the 1973 war. (It was originally thought that the 2nd Armd. Div. would be deployed.) The 9th was not a first-line formation and possessed mostly older tanks and few of Syria's 1,100 T-72s. Syrian divisions have four combat brigades, but one is manned at cadre strength; the 9th Div.'s fourth (tank) brigade was not brought up to strength nor replaced by another. Comprising the 43rd Mech. and 52nd and 53rd Tank Bdes., most of its seven tank battalions had Soviet T-55 and T-62K/M tanks, though one or two battalions had T-72s, giving it about 250 tanks. The five mech. infantry battalions had BMP-1 IFVs backed by 6 x 6 BTR-60 APC support variants. The division also has an artillery regiment and small AD regiments; engineer and signal bat-

talions; recon., transport, chemical defence, and medical companies. Soviet 122mm D-30 howitzers, SA-8 and 9 SAMS equip the first two units while the recon. company has 4 x 4 BRDM-2 vehicles. Syrian small arms and other infantry weapons are basically the same as used by Egypt.

Usually described as a para-commando brigade, the Syrian special purpose unit was the 4th Commando Gp. (*Fa'uj*), comprising three small battalions, from the Commando (*al-Wahdat al-Khassa*) Division. Not all of these battalions are fully parachute qualified. Traditionally, they are composed only of troops belonging to the Alawite sect to ensure their loyalty to the regime. The commandos were used extensively in Lebanon and many are combat experienced. The 600-man unit was based in the UAE.

Coalition forces, and the US above all, were cautiously suspicious of the Syrians. Care was used when sharing intelligence and a close watch was maintained on their activities. Initially the Syrian division was deployed as a forward screen by JFCN. On 5 February they fought a brief engagement with Iraqi forces. On the eve of the ground war the 9th Armd. Div. was pulled back and the Saudi/Kuwaiti units and two Egyptian divisions led the JFCN attack across the border, with the Syrians in corps reserve.

By the time of the ground war, coalition arab forces were organized into two Joint Forces Commands (JFC), North and East. JFCN, sandwiched between the XVIII (US) Abn. Corps and I Marine Expeditionary Force, consisted of Egyptian 3rd Mech. and 4th Armd. Divs., 9th Syrian Armd. Div., both countries special purpose units, Saudi 4th Armd. and 20th Mech. Inf. Bdes., and the Kuwaiti *Shaheed* and *Al-Tahrir* Brigades. JFCE on the

Members of the 2nd Foreign Legion Inf. Regt. (2^e REI) wear the olive green C86 chemical protective suit and new desert camouflage helmet cover. The corporal to the left wears the new desert camouflage armour vest; the chief corporal on the right wears the old OG model, as does the sniper in the centre. The corporals carry 5.56mm FAMAS assault rifles while the centre man is armed with a 7.5mm FR F1 sniper rifle mounting a 3.8 x L806 scope. The TR-PP-11B 'handie-talkie' is used for inter-platoon communications. (ECPA)



coast was composed of three task forces. TF Omar: Saudi 10th Mech. Inf. Bde., UAE Motorized Inf. Bn., and a motorized infantry battalion of the 6th Royal Moroccan Regiment. TF Othman: Saudi 8th Mech. Inf. Bde., Kuwaiti *Al-Fatah* Bde., and a Bahrain infantry company. TF Abu Bakr: Saudi 2nd National Guard Motorized Inf. Bde. and a Qatar mechanized battalion with French equipment. The other GCC and Arab forces, some 40,000 troops, conducted rear area security missions or were in reserve.

IRAQI ARMY

As a multi-national force frantically assembled in the Gulf, American servicemen deployed under the impression that the Iraqi armed forces were patterned on the Soviet model in organization and tactics. This misconception was principally caused by the apparent predominance of Soviet equipment and the presence of accompanying advisors and technicians. This myth was perpetuated by stories of massed Iraqi artillery and huge tank battles during the eight-year Iran-Iraq War, all lending credence to the 'Soviet clone' theory.

The first surprise for deploying US forces was the Iraqis' wide variety and abundance of non-Soviet equipment. The second surprise, when other allied forces began to arrive in Saudi Arabia, was that most were equipped with many of the same weapon systems and aircraft as their

common adversary: forces on both sides of the line in the sand were equipped with many of the same weapons originating from Brazilian, British, Chinese, French, South African, Soviet, and US sources, along with others. What this meant on the ground was an increased difficulty in the rapid identification and engagement of combat vehicles — a problem no less difficult from the air. The difficulty was compounded by the deployment of some smaller allied Arab contingents, equipped similarly to the Iraqis, forward of US forces in the security zone. There were also concerns that unfamiliar allied vehicles, not necessarily possessed by the Iraqis, might be engaged simply because they looked different. The situation was ripe for 'blue on blue' incidents, and the fears proved to be well grounded.

The Iraqi Army was rated as the world's fourth largest, with about 955,000 regulars and 480,000 reservists, though estimates vary. It was the most combat experienced in the world and one of the better equipped. However, as the product of a totalitarian state and lorded over by the self-styled military genius Saddam Hussein, it possessed a number of fatal flaws.

Hardware

A logistician's nightmare, the Iraqi armoured, mechanized, artillery, and air defence forces were equipped with a widely diversified inventory. The Iraqis reduced maintenance and spares difficulties by concentrating like vehicles and weapon systems within the same brigades and other units. While there were shortages of spare parts for some equipments, especially micro-electronics and avionics, Iraqi industry demonstrated, until the air war began, the

capability not only to produce spares but to manufacture weapon system components, effect product improvements, and even produce indigenously designed systems (usually based on existing designs). However, cannibalization was a common practice. Though the Iraqis displayed a number of product improved weapons and some ingenious composite weapon systems, these were more the exception than the rule.

Though much of the Iraqis' hardware dated from the 1960s and '70s, and was considered inferior to the Western equipment facing it, their capabilities were not generally underestimated by coalition commanders. Some were upgraded through product improvements, and the sheer numbers in some categories more than made up for the outdated technology, or so it was thought. They were thought to be orchestrated by combat-experienced commanders and staffs at all levels, but this too proved to be overly pessimistic.

With some 5,500 tanks, the Iraqi armoured forces were a major concern to everyone facing them; the bulk of these were provided by 3,600 Soviet T-54/55s with 100mm guns. Numbered among these were several hundred of their Chinese clones, the Types 59 and 69-I, as well as the similar Romanian TR-77. The T-54/55s were assigned to some armoured and many mech. brigades as well as in small numbers to infantry divisions. The second most numerous tanks were 1,200 or more Soviet T-62s with 115mm armament. These equipped less than half the tank battalions in the armoured and mech. divisions. The much publicized 500-plus T-72 tanks, mounting a 125mm gun,

were the only really modern main battle tanks Iraq possessed. Three variants were used. The earlier Soviet-made T-72B was fitted only with a coincidence rangefinder. The improved T-72G was made in Poland and Czechoslovakia. The even more improved T-72M1, called the *Assad Babil* (Lion of Babylon), was assembled from Soviet and Iraqi-made components in Iraq. These equipped Republican Guard (RG) armoured and mech. brigades.

Insignificant quantities of other tanks were also held. These included British Mk 3/3P and 5/3P Chieftains (200-300 captured from Iran, but many passed to Jordan) and some 100 Soviet PT-76s. Captured Kuwaiti Chieftains may have been pressed into service.

Iraqi's mech. and armoured divisions were equipped with a hodge-podge of over 8,000 APCs. Most of these were older Soviet supplied full-tracked BTR-50PKs, 8 x 8 BTR-60PBs, and 6 x 6 BTR-152s. Czechoslovak OT-62Bs (similar to BTR-50) and 8 x 8 OT-64Cs were also used. About 1,000 Soviet BMP-1 and 2 IFVs equipped RG units. Various Soviet armoured command vehicles were also used. The RG marine brigade, committed in the Kuwait invasion, was equipped with Brazilian 6 x 6 ENGESA EE-11 Urutu amphibious APCs. An odd mix of other APCs were also held, often being provided through third parties during the Iran-Iraq War; these include the Chinese full-tracked YW531, Hungarian 4 x 4 PShZ-IV which have mechanical problems, French full-tracked AMX-10P, French 4 x 4 Panhard M3, Italian 4 x 4 FIAT-OTO Melara Type 6614, and Yugoslavian full-tracked M-60P. Some of these were used as recon. vehicles rather than APCs. Other armoured cars equipping corps and division recon. units included the Brazilian 6 x 6 ENGESA EE-9, French Panhard 4 x 4 AML 90 and AML 60-7 plus large numbers of the Soviet 4 x 4 BRDM-1s and 2s. Virtually all of this 'used car lot' of APCs and recon. vehicles mounted various combinations of machine guns, though the BMP-1s and 2s had 73mm and 30mm guns.

Other light armoured vehicles were captured in Kuwait; their surviving numbers (those given are Kuwaiti pre-invasion holdings) and status were unknown, but due to their generally easy operation and numbers, some were employed. These included 130 British Saracen APCs, 100 British Saladin armoured cars, and 230 US M113 APCs. Some of the 56 US-made M901 ITVs were also captured from Kuwait.

Corps and division antitank battalions were equipped



Troops of 2nd REI secure Al-Salman 80 miles inside Iraq, 23 February. All wear the new sand, tan, and brown desert camouflage

helmet cover, uniform, and armour vest. They wear standard black leather boots. (ECPA)

with wheeled vehicles mounting ATGMs. The most numerous were Soviet BRDM-1s and 2s mounting AT-2 Swatters (BRDM-1 only), AT-3 Sagers, or AT-5 Spandrels. About 100 French VCR/THs mounting HOT ATGMs were also used. Some corps and the reserve infantry divisions' antitank battalions were armed with Soviet 85mm D-44 and 100mm M-1955 towed antitank guns. Ground-mounted ATGMs were issued to infantry battalions and included Soviet AT-3 Sagers and AT-4 Spigots alongside Milans and HOTs plus Soviet 73mm SPG-9, 82mm B-10, and 107mm B-11 recoilless guns.

Iraq's better than 4,000 artillery pieces represented an even more international flavour than other equipments. At division level the most numerous pieces were the Yugoslav version of the Soviet 122mm D-30 howitzer and its Iraqi copy, the *Saddam*. Other divisional artillery were the older Soviet 85mm D-44 gun, 100mm M-1944 gun, and 122mm M-1938 howitzer. Large numbers of Soviet 130mm M-46 guns were employed for counterbattery by corps artillery. Corps artillery also employed Soviet 122mm M-1931/37 and D-74 guns, 152mm M-1937 and D-20 gun-howitzers, and 152mm M-1943 howitzers. Many of the Soviet 130mm and 152mm pieces were being rebarrelled with Iraqi-made 155mm tubes. Iraq produced copies of the highly effective South African 155mm extended range full bore-base bleed (ERFB-BB) ammunition types and was attempting to standardize this calibre. Iraq also acquired 200 Austrian 155mm GH N-45 gun-howitzers through Jordan, and 100 South African 155mm G5 gun-howitzers. Some US 155mm M114 howitzers were used, as were small numbers of various makes of Western 105mm howitzers.

Only about 10% of Iraqi artillery was self-propelled, and these were issued solely to the RG. Among these were the Soviet 122mm 2S1 and 152mm 2S3 howitzers. Kuwait had loaned a battery of French 155mm Mk F3 SP guns to Iraq during the Iran-Iraq War and a further 80 fell into Iraqi hands after the invasion. Iraq also had 85 French 155mm GCT SP guns; interestingly, in 1982 Saudi Arabia loaned Iraq some of its GCTs to train on while awaiting delivery of their own. Iraq had earlier captured unknown numbers of US 155mm M109 SP howitzers from Iran; 18 more were captured in Kuwait. The much published Iraqi-produced long-range 155mm *Majnoon* and 210mm *Al Fao* guns, on a 6 x 6 chassis, were still in the testing stage.

Another 10% of the Iraqi artillery forces were composed of multiple rocket launchers (MRL). The predominant types were the Soviet 40 x tube 122mm BM-21, Chinese 12 x tube 107mm Type 63 and old Soviet, 16 x rail BM-13-16 MRLs, plus the Brazilian AVIBRAS Astros II in 127mm (32 tubes), 180mm (16 tubes), and 300mm (4 tubes).



A V-150 Commando APC of the Saudi Arabian National Guard's King Abdul Aziz Bde. after the battle of Al-Khafji. This turrettless version mounts

a .50-cal. M2 MG, and the crew is armed with FAL rifles. Several of these APCs were lost during the battle at the end of January. (CPT Stephen R. Zeltner)

A high density of mortars were issued including Soviet 82mm M1937s and 120mm M1943s. The most common were the Iraqi-produced series of 60mm, 82mm, 120mm and 160mm mortars, all known as the *Al-Jaleel* and based on Yugoslav models.

The mass of Iraqi artillery caused much concern to coalition forces, and rightly so. Huge numbers of Soviet and Western-made fire control, artillery locating radars, and meteorological systems were in use. The long-range pieces were of special concern due to the vulnerability of coalition service support units and headquarters, as well as their apparent ability to counterbattery allied artillery. Again, these fears were proved invalid.

The whole range of Soviet SAMs were employed: SA-6, 7, 8, 9, 13, and 14 plus French Rolands (SA-2s and 3s were found only in the Air Defence Force). Air defence guns included the Soviet quad 23mm SP ZSU-23-4, twin 23mm towed ZU-23, quad 14.5mm ZPU-4, and 57mm S-60 towed. These were backed by a sophisticated radar warning and target acquisition net, and though these were virtually neutralized this was actually no easy effort.

Iraq relies on the Soviet AKM and AKMS, assault rifles, both locally made (known as the *Tabuk*) plus East German and Romanian variants. Machine guns, all Soviet, were the 7.62mm light RPD and RPK (produced locally as the *Al-Ouds*), 7.62mm medium SGM and PK, and the 12.7mm heavy. The 7.62mm FN MAG-58 was used on some armoured vehicles. Both the 7.62mm Soviet SVD and the similar Romanian FPK sniper rifles were used. A Yugoslav licensed M76 version of the SVD was also produced, the *Al-Kadisia*. Pistols included the Soviet 7.62mm TT-33 and a copy of the Italian Beretta 9mm M1951,



A pre-invasion Kuwaiti ¾-ton One-Ten general service Land Rover carries special forces troops and a pedestal-mounted MAG MG. The vehicle's

camouflage, like the uniforms', is black with dark and light grey (see Plate A4). The cab's overhead lights are blue. (Official)

called the *Tariq*. The vendable RPG-7 rocket launcher was also locally made as the *Al-Nassira*.

Command structure

The Armed Forces General Staff (GHQ) is composed of the Military Control Directorate and the Deputy Chiefs of Staff for Operations, Instruction and Training, and Administrative Affairs. This latter deputy oversees the Manpower and Quartermaster General Directorates. The QM General is responsible for all logistical, maintenance and support functions. The GHQ exercises direct control of the 1st-7th and 9th Corps, 1st Special Corps, Republican Guard Forces Command, GHQ troops (with large numbers of artillery and combat support battalions), GHQ reserve divisions and brigades, and army aviation. The Air Force, Air Defence Force, and Navy were supervised by their own staffs, thus creating interservice co-ordination difficulties which persisted through the Iran-Iraq War and during the events of 1990-91. The forces in Kuwait were under the control of a GHQ forward HQ in Basra — in effect, an army group HQ.

Eight years of unrelenting war has produced an army with a high degree of combat experience capable of conducting multi-corps operations. Staffs at all levels have demonstrated the ability to co-ordinate massed artillery, execute complex manoeuvres, and rapidly marshal forces over great distances by a designated time. Movement of units, command and control capabilities and provision of logistic support are strong points. There are limitations: junior commanders often lack initiative and confidence, fear harsh punishment for failure, and are stifled by a forced loyalty to the regime. At higher levels there has been a decided lack of interservice co-operation. Coalition commanders maintained an attitude of expecting the worst — an effectively commanded, organized, and fully supported

Iraqi Army — even though much evidence indicated otherwise.

The basis for this caution was Iraq's performance in the latter part of the Iran-Iraq War. After eight years of brutal war the Iraqis had refined static defensive operations, backed by mobile reserves. Their skills in this area, coupled with the time available to prepare the defences, were a major worry to the coalition. The main cause for concern was the skill the Iraqis had demonstrated in five offensive operations, the *Tawakalna ala Allah* (In God we Trust) Campaign, executed between April and August 1988. These operations, conducted principally by the newly expanded Republican Guard, were highly successful, regaining all previously lost ground and utterly destroying Iran's armed forces, resulting in the war's conclusion to Iraq's benefit.

Republican Guard

The RG had been formed in 1980, a single brigade of individuals from Tikrit, Saddam's hometown. Initially formed to safeguard the regime, it was later used as a small strategic reserve, but saw little action during the course of the Iran-Iraq war. By 1986 it had grown to five well-equipped brigades.

By 1986 the war had ground down Iraq, though both sides had suffered appalling casualties. Iran had captured Al Faw, at the mouth of the Euphrates and Tigris Rivers; and other reverses forced the Ba'ath Party to begin considering more drastic actions. The Ba'ath Extraordinary Congress of July 1986 hammered out a new strategy and placed the machinery in motion that would lead to a complete overhaul of the armed forces. The most severe problem facing Iraq was a shortage of manpower. A mass mobilization was begun that included press-ganging draft dodgers into the Popular Army — the Ba'ath militia.

The only remaining manpower source were deferred university students. It was next announced that universities would not reopen in the autumn. The students were directed to attend a military summer camp, where physical conditioning and enthusiasm for the regime were emphasized. The students were resigned to military service since it was never announced when or if the schools would reopen. The next step was for the regime to announce that Sunni volunteers would now be accepted into the RG from anywhere in Iraq, not only the Tikrit area. The incentives for the masses of students were great. Facing the prospect of induction into line units, thousands of intelligent, physically fit men in their early 20s pounced on the chance to join the elite force and to reap the favour of the president — and the benefits such service would bring after the war. Those who elected not to join were returned to camp in 1987, with many being persuaded to reconsider.

The RG grew rapidly to some 25 brigades, led by loyal officers transferred from other units, though this depleted much of their experienced leadership. It was this new force that successfully executed most of the *Tamakalna ala Allah* campaign. Members of the RG received better rations, high pay, and quality uniforms and equipment when compared to the rest of the army. The RG Command continued to grow, and by the time of the Gulf War consisted of:

- 1st 'Hammurabi' Armd. Div.
- 2nd 'Medina' Armd. Div.
- 3rd 'Tamakalna' Mech. Div.
- 4th 'Al Faw' Mech. Div.
- 5th 'Baghdad' Mech. Div.
- 6th 'Nebuchadnezzar' Mech. Div.
- 7th 'Adnan' Mech. Div.
- 8th Special Forces Div.

Large numbers of corps support units.

Its armoured, mech., infantry, marine and special forces brigades were equipped with higher quantities and qualities of equipment than the rest of the Army. It was this force that led the Kuwait invasion, covering 80 miles (though against little resistance) and securing Kuwait City in under 12 hours. It did demonstrate a high degree of operational planning and co-ordination. The RG was soon withdrawn from the forward positions as the invasion force reconfigured to a defensive force. Elements were redeployed as an operational reserve along both sides of the Kuwait/Iraqi border, and as a strategic reserve around Baghdad.

Corps

Tactical unit organization is much different from the Soviet model. The Iraqis borrowed organizational concepts from the British, Americans and Soviets and during eight years of practical experience, implemented many modifications suited to their own needs, the terrain, and enemy. It is not unusual for many more manoeuvre units than the worldwide standard of three or four to be attached to a given level formation.

Iraq's eight corps could have up to six or even more divisions plus several separate brigades (one or more of which were commando); the number and mix of divisions depend on the corps' assigned mission. The 2nd, 3rd, and 7th Corps were moved into Kuwait and extended 50 miles west along the Iraqi border with Saudi Arabia. The 9th

A Saudi-supplied M113 combat engineer vehicle, with dozer blade, used by the Kuwaiti 35th Shid Armd. Bde. The upper flag is green and white while

the lower one is black and green: their meanings are unknown. Other Kuwaiti combat vehicles flew the national flag. (Naydean Blair)

Corps was later formed from reserve divisions and moved into Kuwait as well. The 1st, 4th, 5th and 6th Corps remained in the Baghdad area and along the Turkish and Syrian borders.

The corps artillery brigade had four to eight battalions with long-range pieces plus a locating battalion. The anti-aircraft artillery brigade had five to eight different types of battalions with a wide range of Soviet guns and missiles and some French and other equipments. The corps also possessed recon., antitank (two or more), field engineer, engineer bridging, EW, signals, electrical and mechanical engineer, supply and transport, and medical battalions. It also had an aviation wing of four squadrons equipped with Soviet, French, and other helicopters. Tank-transport regiments and battalions were attached as needed.

Divisions

The six armoured and four mech. divisions had a mix of three or more armoured and mech. brigades. Two more ill-equipped armoured divisions were later formed from reservists.

There were 50 infantry divisions, nine of which were mobilized from 100,000 reserves (men over 30) after the Kuwait invasion. Almost 30 divisions were deployed in Kuwait and along the Saudi border, backed by some armoured and mech. brigades. Six armoured and mech. divisions were held in the desert west of Kuwait and south of Basra as an operational reserve and to protect that flank. Infantry divisions generally had three brigades and sometimes a commando brigade or battalion. However, up to eight brigades could be attached to a division, though those in the border area were generally understrength, principally due to mass desertions.

The division artillery usually had three or four battalions of, generally, 122mm howitzers, though additional





A Yugoslav-built M-84 tank delivered in Saudi Arabia for use by the Kuwaitis. The M-84, ordered prior to the Iraqi invasion, is an up-graded version of the Soviet T-72M. It mounts a 12.7mm DShK MG at the commander's hatch. Auxiliary fuel tanks are fitted on the rear deck. (Naydean Blair)

battalions were often attached from corps and GHQ assets providing up to 100 tubes. Air defence assets varied widely, with armoured and mech. divisions well equipped with several ZSU-23-4 SP gun, 37/57mm towed gun, and SA-9 SAM battalions. Infantry divisions usually had only one or two AD gun battalions with 14.5/23/37/57mm pieces. All divisions had recon., antitank, field engineer, signals, electrical and mechanical engineer, supply and transport, and medical battalions plus MP and chemical defence companies. Infantry divisions also had a small armoured battalion.

Brigades

Armoured and mech. brigades have four combat battalions, usually on a three-to-one ratio, i.e. three mech. and one armoured or vice versa. RG battalions were organized on a four-to-one ratio. Infantry brigades had three battalions. All types of brigades possessed a brigade HQ and signals, assault engineer, and supply and transport companies plus recon. and chemical defence platoons; some brigades also had a commando company and light artillery and/or mortar batteries. Separate brigades held in corps reserve were often augmented with additional artillery. The small commando brigades had two or three battalions and a service company. In Kuwait, these often melted away as they provided replacements for the dwindling line units due to bombing casualties and desertions.

Besides up to 25 commando brigades, Iraq also possessed a number of actual special operations and special purpose units, most of which were assigned to the RG Command. Among these were special forces, airborne/airmobile, and marine brigades. During the Iran-Iraq war Iraq used its special operations units rather reluctantly when compared to their adversary, and with less success. Commando units are found at all levels: these are basically light infantry units (sometimes truck-mounted) tasked with scouting and shallow infiltration harassing attacks, but are also used for rearguard and as a reserve; they have also been used to seize shallow key objectives in advance of

the main forces and have mounted air assaults into the enemy's rear. They contributed little to the Gulf War, however.

Combat battalions

Iraqi armoured battalions were designated 'regiments' on the British pattern, but are referred to as battalions here for simplicity. Armoured and mech. battalions had HQ, admin., and combat support companies, the latter with antitank (4 x BRDM-mounted ATGMs, 4 x recoilless guns) and mortar (6 x 82mm) platoons, plus a battalion recon. platoon (6 x recon. vehicles).

A mech. battalion's three mech. companies have an HQ (1 x APC, 2-3 x trucks) and a weapons and three rifle platoons. Rifle platoons have an HQ and three 10-man squads, each with an APC and a light MG. The weapons platoon has several APCs or light trucks, 4 x 12.7mm MGs, 3 x 60mm mortars, and 12 x RPG-7s (for attachment to rifle squads). Armoured battalions have three tank companies with two tanks and an APC in the HQ and three three-tank platoons; RG companies have four platoons.

Infantry battalions were similar to their mechanized counterparts, but without APCs and usually possessing fewer supporting weapons, especially in the reserve units. Commando battalions are similar to infantry, but had less manpower and were even more lightly armed, though usually provided with trucks. Commando units at all levels were light infantry employed as rear area security and forward screening forces. They were seldom used for special operations, even during the Iran-Iraq war.

Task organized battalions were commonly detached and reinforced with elements from brigade and division to form combat groupings. A tank-heavy combat grouping may have had three tank, plus one each mech. rifle, anti-tank, AD, and engineer companies plus an artillery or mortar battery. A mech. rifle platoon may have been attached to each tank company. Even the poorly equipped infantry battalions in the forward defensive positions were augmented by additional antitank weapons, and an at-

tached tank company was held in brigade reserve as a local counterattack force.

THE PLATES

A: Invasion of Kuwait, 2 August 1990:

Iraq's unprovoked invasion of Kuwait was executed solely by elite Republican Guard (RG) forces. The resistance by surprised, outnumbered and outclassed Kuwaiti forces, though lasting several days, was in vain.

A1: Infantryman, Iraqi Republican Guard

The Iraqi Army issued a wide variety of camouflage uniforms, either locally fabricated or purchased over the years from various Middle and Far Eastern countries, Pakistan, France, and Britain. From the latter were acquired uniforms of desert, tropical, and European Disruptive Pattern Material (DPM), all used extensively by the RG, not so much for their camouflage effectiveness as for their quality. The RG also used several indigenous, predominantly green woodlands camouflage patterns, as the example worn here. It must be pointed out that the bewildering variety of camouflage uniforms (some two dozen have been confirmed) were not issued on a unit status or branch basis, as often reported. While some organizations, e.g. the Popular Army, appeared to be issued specific patterns, this was because of available stocks in the relevant district. Examples of patterns could normally be found in any given unit. A US M1-style West German border troops helmet is worn with French *Cébé* goggles. The red RG Command patch was also used as vehicle insignia, sometimes with a number within; it was worn on the left shoulder or both, and is one of the few examples of Iraqi shoulder patches. Pakistani-made British pattern 58 web gear was widely used. A wide range of principally East European protective masks were issued. AK assault rifles, both locally produced and procured from Warsaw Pact states in many variants, were the predominant infantry weapon; this AKM is Romanian.

A2: Tank officer, Iraqi Republican Guard

Though tankers did use Soviet-style OD or black coveralls, various camouflage and OG field uniforms were also worn. This tanker wears the common sand coveralls with an armoured crewman patch. A web 'rescue handle' is provided in a slit behind the shoulders. The Soviet flame retardant cloth helmet with integral earphones and throat microphones was standard. He is armed with a licensed copy of the Beretta 9mm M1951 called the *Tariq*. A Pakis-

tani-made shoulder pouch is used as a map case. This captain (*naqib*) wears the common yellow stencilled rank shoulder slides rather than the gold-coloured metal versions. Other than officers' rank, Iraqi field uniforms were generally devoid of insignia. Many insignia were manufactured in West Germany.

A3: Infantryman, Royal Kuwaiti Army

The fairly well-equipped Royal Kuwaiti Army's uniforms show a heavy British influence. Besides this four-colour (dark and light brown, khaki, sand) uniform, sand-colour and olive green field uniforms were also issued. The helmet is a steel US M1. Black berets were worn by most units with service uniforms. British pattern 58 sand-coloured web gear was standard, and the FN L1A1 rifle the standard shoulder weapon.

A4: Officer, Royal Kuwaiti Special Forces

The small special forces unit used a unique three-colour (black, dark and light grey) uniform, impractical for desert or urban use as most Kuwaiti buildings were sand-coloured. The grey US-style steel helmet bears the Kuwaiti coat of arms. This lieutenant (*mulazim*) is armed with a German-made H&K 9mm MP5K compact sub-machine gun.

B: Initial Deployment, US Forces:

The early deploying US troops wore whatever uniforms were available; though many units were issued the Desert Battle Dress Uniform (DBDU), others arrived with woodland camouflage BDUs and little else in the way of desert oriented gear.

B1: Platoon Leader, US 27th Engr. Bn. (Abn); King Abdul Aziz Airport, Aug. 1990

This 20th Engr. Bde. (Abn) unit second lieutenant wears the standard DBDU adopted in 1982 and, surprisingly, made of the heavyweight fabric used in the standard woodlands BDU. Though the US had long been committed to deploy troops to the Gulf region, the DBDU's six-colour camouflage pattern (dark and light brown, khaki, sand, black, and white) was designed to match the desert terrain of the southwestern USA. They were nicknamed 'pebble' or 'chocolate chip' cammies, due to the small black and white pebble pattern. Standard All-purpose Lightweight Individual Carrying Equipment (ALICE) was used by all US forces, often augmented with the old M1956 (canvas) or M1961 (nylon) combat pack ('butt' or 'ass pack'). The canvas OD 7 map and photo case is used by some officers. On the ground is a large ALICE rucksack. Two-quart canteens, issued with both OG and sand covers, were profusely issued. The new type leather combat boots were

worn by many troops; these, while hot, proved to be more 'sandproof' than the tropical (or jungle) combat boots. He is armed with the older M16A1 rifle.

B2: Sniper, US 82d Abn. Div.; Oct. 1990

The new 7.62mm M24 sniper system, sand-painted in this case and mounting an Ultra 10xM3A scope, has replaced the M21 sniper rifle (based on the M14) in many units. This sniper scans for a target using a 20xM49 spotting scope. Nicknamed 'vampires', as they stalked their prey at night along the Kuwaiti border, snipers quickly adapted their fieldcraft skills to the desert. The desert night parka and trousers, the former issued with a liner, provided both warmth and protection from detection by infrared night vision devices; this is accomplished by the use of a printed grid pattern that blends with an infrared viewer's grid-like screen. The fabric's dyes, as with most other US field uniforms, are infrared absorbent. Desert versions of the 'ghillie suit' were also used, with sand-coloured burlap strips sewn to DBDUs. Many units brought their jungle boots, which sometimes caused foot problems as they were not generally broken in like their regular boots; the drainage eyelets also allowed sand to infiltrate, and the sole's steel shank served to conduct ground heat.

B3: Crew Chief, US Bty. A, 21st FA, 1st Cav. Div.; Oct. 1990

Units originally oriented toward Europe initially deployed wearing the standard four-colour (dark green, dark brown, black, khaki or light green) woodlands BDU. Most were soon issued the DBDU, but some of the rear service support units never received them. The wearing of the US flag caused somewhat of a stir when some US officers perceived that it offended the Saudis and ordered its removal in some units; this was soon clarified and their wear was re-approved. The DH-132 Combat Vehicle Crewman's (CVC) helmet was painted sand by some units, but many left them OG. This M270 Multiple Launch Rocket System crewman is armed with an M16A2 rifle and carries an M25 armoured vehicle crewman's protective mask.

B4: Machine Gunner, US 7th Marine Expeditionary Bde.; Al-Jubayl, Aug. 1990

Marines wear basically the same uniforms and equipment as the Army, but generally without insignia other than collar rank (brown rather than the Army's black). The desert hot weather hat was issued as a component of the DBDU. Jungle boots were standard Corps-wide issue (reverting to leather boots in 1992). The M60E3 MG replaces the heavier M60 in the Marines and Navy. This gunner is also armed with a 9mm M9 pistol in an M12 holster accompanied by an M1 magazine pocket. He is equipped

with the Personal Armor System for Ground Troops (PASGT) issued to most combat units. There was a shortage of these, especially in the very small and very large sizes, which lasted into February. Plastic desert camouflage net garnishing is fitted to the PASGT Kevlar helmet. Mineral water, issued in 1½ litre plastic bottles, became almost a trademark of the troops in the desert, as did the thousands of sunglasses issued.

B5: US 1st COSCOM Expediter; Dhahran, Sept. 1990

XVIII Abn. Corps' 1st Corps Spt. Command and many other major logistical units struggle to off-load, receive, and marshal the masses of weapons, vehicles, equipment, supplies, and materials that flooded into Saudi Arabia. Logisticians became some of the most critical people on the ground. Non-military hardhats were required in all off-loading areas and issued in all colours. The armband identifies this captain as a member of a Movement Control staff. To control operations, commercial FM walkie-talkies, nicknamed 'bricks' due to their shape and size, were used extensively.

C: Build-up, British and French Forces:

Like their US counterparts, early deploying Western European troops were often not initially outfitted with desert uniforms and equipment.

C1: Caporal-chef, French 1st Foreign Legion Cav. Regt.; Yanbu, Oct. 1990

This chief corporal is outfitted in the standard French Army M1964 combat uniform (*tenué de combat mle. 1964*). His regiment, 1^{er} REC, is identified by the silver beret badge ('*macaron*') and the Legion's diamond-shaped unit/branch badge (*écusson*) on the left sleeve, while the 6th Lt. Armd. Div. patch is worn on the right shoulder. Silver stripes in the rank insignia again identify him as a cavalryman. The green beret is worn by all Foreign Legion units. His equipment includes a 5.56mm FAMAS assault rifle, large rucksack, and duffle bag. His M1978 F1 helmet is fitted with plastic camouflage net garnishing.

C2: Caporal, French 1st Spahis Regt.; Hafar al Batin, Oct.; 1990

This corporal wears the NATO green C86 chemical protection suit (*habit de protection*) and soft plastic, fabric lined Type 654SP4 tank radio helmet (*casque radio char*) with integral microphone and earphones. While it protects the crewman's head from a rough ride and is fire resistant, it offers no ballistic protection. A FAMAS assault rifle cleaning kit pouch is attached to the right suspender, though often worn on the belt.

C3: Troop commander, British The Queen's Royal Irish Hussars; Sept. 1990

During the build-up and exercise phase of Operation GRANBY the 'tribal items', inseparable from British Army unit morale, were seen to some extent, usually in the form of cap badges and shoulder titles added to the desert combat uniform. The QRIH probably went further than any other deployed unit, wearing two items peculiar to this regiment's officers. The 'tent' hat, inspired by a long association with the royal house of Denmark, was worn square on the head; other units mock it as the 'Thunderbird's hat' after the children's TV puppet series. The regimental officers' stone-coloured Guernsey sweater is not a desert issue item, being worn in the UK and BAOR; for GRANBY the 7th Armd. Brigade's jerboa patch was added. The issue desert combat boots are made of suede and sand-coloured canvas. The pattern 90 Load Carrying Equipment (PLCE) respirator haversack, attached to a pattern 58 belt, contained an S10 respirator and a range of chemical detection and decontamination items.

C4: Corporal, British The Royal Scots Dragoon Guards; Oct. 1990

The OG Nomex fire-resistant tank suit was widely worn during the early stages of GRANBY, as priority for issue of 'desert combats' went to the infantry. These were later issued to all front-line units; and during the ground assault, tank crews wore the desert pattern NBC suit (Plate D2). This tanker wears the Racal Electronics armoured

fighting vehicle crewman's helmet, which fits over a separate headset assembly, with issue Scott goggles. Infantry Mk 6 helmet desert camouflage covers were sometimes fitted over AFV helmets. The pistol set, with Browning 9mm L9A1, of the pattern 90 PLCE, is worn in its shoulder configuration; the narrow waist strap is rolled out of sight in this case. Small black-on-OG corporal's chevrons are worn. The standard issue combat boots were widely worn before general issue of the desert version, though they were worn throughout the operation by second-line troops.

D1: Second lieutenant, British 49 Field Bty., 2nd Field Regt., Royal Artillery

The 'desert combats', or officially, No. 9 Dress, Desert Uniform, were issued on the basis of two sets to most troops between late 1990 and January 1991. They came in two versions; the first, illustrated here, has a sand-colour background overprinted with a tight pattern of reddish brown ('sand and rust') — officially, light and dark earth) and straight leg cargo pocket flaps. The second version have a more widely spaced pattern of brown splotches and pointed cargo pocket flaps; there are other trivial differences. Both versions have two chest pockets, shoulder straps, and a small field dressing pocket on the rear of the upper right sleeve. The shirt is obscured by the body armour vest with a matching cover. The vest features a quick-release strap hanging at the left front, for rapid access to wounds, and back straps to help support equipment. Many types of boots were used, including 'Polish'

A Czechoslovak senior lieutenant (nadporučik) discusses perimeter security with a Vz.59 assault rifle-armed lieutenant (poručik). These chemical protection company troops' uniforms are light OG. On the senior lieutenant's left shoulder can faintly be seen the Czechoslovakia tab and national insignia patch (see Plate H1). The helmet covers are tan, though two-colour camouflage (tan, light brown) were also issued. Behind them is a Tatra T815 VT 26 265 8x8.1R 10,000kg cargo truck along with Praga V3S-R3SP decontamination trucks. The Tatra is painted light and medium OG while the Pragas are light OG only. The door national emblems are blue-white-red. (Adolf Turek)





An Iraqi T-55 on the outskirts of Kuwait City. The hull marking is a unit vehicle registration number while the turret insignia is a unit identification. Both are

black on white; others were red on white, black on yellow, or simply black painted directly on the vehicle's base colour. (Naydean Blair)

suede chukka boots, two versions of an RAF pattern suede model with zippers on the inside uppers, and these commercial Timberland boots. The Arab headcloth (*shemagh*) was worn in many colour combinations, the most common being red/white, black/white, and brown/olive drab, along with an issue brown/white. The US desert night parka was a popular trade item. The Royal Artillery and Royal Engineers, particularly, tended to display unit insignia on brassards. This second lieutenant wears black rank and 'R.A.' title on a sand shoulder strap slide (also seen in OG, DPM, and desert pattern); and other insignia on a light khaki brassard — from top to bottom: 16th/5th The Queen's Royal Lancers badge (to which unit this battery was attached; worn only by officers), 4th Armd. Bde. 'rat patch', and the RA scarlet-over-blue flash.

D2: Mech. infantryman, British 1st Armd. Div.

Fighting through the positions of the Iraqi 12th Armd. Div., this sergeant is typical of British infantry during the ground war, regardless of regiment. The new pattern Mk 6 ballistic helmet has a desert camouflage cover garnished with 'scrim', though this was little used. Typically it bears name, rank, and blood group marked with a felt pen. Over the 'desert combats' all personnel wore the desert DPM Mk 6 NBC suit. Chemical detection tape was stuck to green pads at various points on the arms and legs; there was some issue of printed black-on-OG, 2½in. diameter self-adhesive discs bearing rank insignia. He also wears combat body armour, issue desert boots, and is armed with a

5.56mm L24A1 individual weapon — 'IW'. Many infantrymen made up their own webbing sets from pattern 90 components, usually the belt kit minus magazine pouches, and added commercial items, among which this Arktis chest pouch rig was very popular; its temperate DPM camouflage was often streaked with sand-colour paint. Other items such as pattern 58 compass and field dressing pouches were often added. The pattern 90 PLCE belt order was crowded, and many men moved the bayonet to the left brace. Rear support troops were equipped with pattern 58 gear. A discarded 15-rd. 30mm Raden gun ammunition can lies on the ground.

D3: Troop commander, British A Sdn. 1st The Queen's Dragoon Guards

Officers of this 7th Armd. Bde. recon unit wore their embroidered beret badges sewn to the desert camouflage hat, more commonly called a 'floppy hat'. Officers of the 16th/5th The Queen's Royal Lancers, the 1st Armd. Div.'s recon regiment, wore a version of their beret badge embroidered on a sand-coloured patch. There was an issue light brown undershirt, but many other colours were seen, including some with silk-screened unit logos.

D4: Tank crewman, British The Royal Scots Dragoon Guards

A sand-coloured version of the 'woolly pully' was general issue in this brigade. This lance-corporal of 'the Greys' wears the 7th Armd. Bde. patch and his regimentally coloured white-on-black badge of rank on the right sleeve. On the left is the 'Lion of Scotland' patch on an OG brassard, worn only by the crew of the regimental CO's tank. The L2A3 Sterling submachine gun is standard issue to AFV crews.

D5: British combat clothing insignia

Very few insignia were displayed on combat dress by infantrymen; those that did were usually augmentation elements, attempting to retain parent regimental identity while attached to other battalions — a compulsion much more important to the British soldier than his American counterpart. The 1st Bn. The Royal Scots wore a Cameron of Erracht tartan patch on the right shoulder and helmet left side (5a). Officers' rank stars ('pips') and crowns were often sewn to the front of helmet covers on or below the foliage straps, as were NCO's chevrons embroidered in miniature on a rectangular patch, often black-on-OG European issue, but later, brown-on-sand desert issue. Other ranks of the 3rd Bn., Royal Regt. of Fusiliers wore a black FUSILIERS title on a sand shoulder strap loop (5b). The different Guards elements wore a square blue-red-blue Guards flash in various positions. The dispersed sub-

units of the 1st Bn., Grenadier Guards (serving with three other battalions) wore a 2in. version on their right shoulders; the 1st Bn., Scots Guards wore a 3in. version in the same position, while the 1st Bn., Coldstream Guards wore the same size flash on their helmets' left side (5c). Finally we should record the wholly unofficial right shoulder patch worn by many support troops in and around the Al Jubayl Force Maintenance Area, reflecting the naming of the camps after characters from the popular TV comedy series, 'Blackadder' (5d). It is said that the character Baldrick's doom-laden catchphrase 'I've got a cunning plan ...' was heard at staff conferences at a surprisingly high level!

E1: Gunner, French 11th Marine Arty. Regt.

This 11^e RAMa gunner fuses rounds for his 155mm TR-F1 gun during the thrust toward As Salman inside Iraq. A sand-coloured chemical protection uniform was issued soon after the French deployment; though it became apparent that chemical weapons would not be employed, most troops retained the suits as additional weather protection. Over this is worn the new OG armour vest with standard web gear, and the M1978 F1 helmet with a desert camouflage cover and one of the two types of issue goggles, provided with interchangeable amber, green, and clear lenses. France did not issue a desert boot and standard black boots were used exclusively.

E2: Squad leader, French 3rd Marine Inf. Regt.

The sand, tan, and brown desert combat uniform was issued to all French units along with the sand-coloured chemical protection suit. This 3^e RIMa chief corporal wears his rank insignia velcroed to his new type armour vest; Marine units wear their gold and red rank on a dark blue backing. Tan face scarfs were widely worn.

E3: Mistral Gunner, French AD Bty., 35th Pcht. Arty. Regt.

Two batteries of the Matra Mistral SATCP (surface-to-air very short range) man-portable AD missiles were deployed for close-in air defence; the other was from the 11^e RAMa. This 35^e RAP gunner wears his paratrooper's red beret with the standard parachute troops' (*Troupes Aéroportées*) silver beret badge, worn by all Metropolitan and Foreign Legion paras. His issue desert camouflage combat uniform is well displayed. On his right hip is a 9mm M1952 pistol.

F: Egyptian and Syrian Forces:

Equipped with indigenous uniforms and a mix of Soviet and Western equipment, the Egyptians and Syrians were fairly well prepared for the rigours of desert operations. Though their gear was not as modern as that of the West-



Pushed into a desperate Iraqi roadblock attempt south of Kuwait City, a Soviet-built BRDM-2 antitank vehicle saw its final service. The vehicle is

painted OG rather than sand. The back end of a Soviet-made ZSU-23-4 SP anti-aircraft gun can be seen to the right of the BRDM-2. (Naydean Blair)

ern forces, it was sufficient, though lacking in the area of chemical protection.

F1: Infantryman, Egyptian 3rd Mech. Inf. Div.

The Egyptians issued a new desert camouflage uniform in about 1989, replacing the long used reversible model; a cover of the same pattern was also issued for the Soviet SSh-68 helmet. This mechanized infantryman is armed with an Egyptian copy of the Soviet AKM assault rifle mounting a cup-type grenade launcher, issued on the basis of one per squad; it can project a Soviet RG-42 hand grenade about 100 metres. The combat gear comprises an integral pack with magazine, canteen, and mask pouches. Locally made BSS and CM3 gas masks, copied from the Soviet SchM-41 and SchMS respectively, are used. The parachute troops and commandos use the same uniforms and equipment.

F2: Tank NCO, Egyptian 4th Armd. Div.

An insulated field jacket with integral hood is issued in both dark OG and standard camouflage patterns. Besides the winter cap, camouflage 'baseball' caps and bush hats are also issued. This mechanized infantry corporal (*arif*) is armed with an Egyptian copy of the Soviet 7.62mm RPD light MG, issued one per squad. Egyptian tank crewmen wear same uniforms pictured in Plates F1 and F2, along with US DH-132 CVC (Plate B3) helmets, since they are equipped with US armour.

F3: Captain, Syrian 45th Commando Bde.

Syrian forces use a uniform bearing a camouflage pattern similar to the US woodlands BDUs which appears to have been adopted in the mid-1980s. The helmet is a Soviet SSh-68, ranging in colour from light grey to OG to dark OG. This model of Chinese-style chest pouches has four magazine pockets secured by snaps; another model (Plate



A set of Iraqi web gear including both British and Pakistani-made pattern '58 components. The belt, ammunition pouches, and kidney pouches are OD while the waterbottle

pouch and yoke (suspenders) are light OG. Above it is an Iraqi clear plastic wrapped field dressing with red markings. (Jack Bull)

F4) is OG with wooden toggles in place of the snaps, and has three magazine pockets. Both have two accessory pockets on each side for cleaning gear and ammunition cartons. Photographic evidence indicates that all troops were issued only four magazines including the one in the AKMS assault rifle. A Soviet 6Kh4 bayonet is often carried in the fourth pocket. This captain's (*naqib*) rank is displayed on slip-on shoulder strap slides. The background colour of the skull and crossed swords badge identifies the brigade (both red and black were observed, indicating that this may have been a composite unit). Syrian parachute units wear a maroon beret with a gold eagle badge (as on the national flag).

F4: Tank crewman, Syrian 9th Armd. Div.

Being equipped with Soviet tanks, Syrian armour troops use the standard Soviet cloth helmet. The national flag badge is worn on the left chest of the one-piece coveralls. Enlisted men are issued the Soviet SchM-41 gas mask, but with a short, round filter canister fitted to the snout rather than a hose filter, while officers and NCOs receive the SchMS mask with optical lens, voicemitter, and hose filter. Syrian tank crewmen are armed with AKMS assault rifles rather than pistols and sub-machine guns as issued to most countries' AFV crews. This tanker is equipped with the three-pocket chest pouches. Beside him is a case containing 1,200 rounds of 7.62 x 54mm ammunition for his T-62 tank's PKT coaxial MG.

G1: Infantry NCO, Saudi Arabian 20th Mech. Bde.

The RSLF used uniforms almost identical to the US DBDU in pattern, colours, and style. Most regular units

were issued web equipment of the same design as the US ALICE gear, but in sand-colour and bearing 'S-A-A' below its Arabic equivalent, here with West German-made magazine pouches and G-33 bayonet; the rubberized fabric (chemical resistant) pouches consist of a pair of pockets each holding two magazines. A sand-coloured ALICE medium rucksack was also used. A US M17A1 protective mask case is worn on the man's left leg. German-made H&K 5.56mm G-33E rifles were widely issued, though some high priority units received Austrian 5.56mm AUGs. This sergeant (*wakil raqib*) wears the issue stiff-visor field cap and Saudi Arabian shoulder title worn by some NCOs. Sand-coloured fatigue uniforms with similar caps are also issued.

G2: Senior tank NCO, Saudi Arabian 12th Khalid-bin-Waleed Armd. Bde. Gp.

This French-equipped and trained brigade used the standard French Type 654SP4 tank radio helmet, but of sand colour; units with US equipment used sand-coloured DH-132 CVC helmets. This staff sergeant (*raqib*) AMX-30S tank commander examines a German-made H&K 9mm MP5 submachine gun issued to tankers and motorized infantry.

G3: Major, Saudi Arabian Coalition Co-ordination Communication Integration Center Joint Staff

The C³I Center was formed by Third US Army to conduct combined co-ordination with the Saudi Joint Staff under the vice deputy commanding general, Army Forces, USCENTCOM and the Saudi Joint Forces commander. The DBDU pattern pullover sweater was commonly seen on staff officers, but also issued to field troops. This major (*ra'id*) wears the standard RSLF black beret with a national badge.

G4: Infantryman, Saudi Arabian National Guard

Though units are fairly well equipped, the National Guard does use some older individual equipment, as is the case of this Bedouin private (*jundi*). He wears the old pattern desert camouflage (brown and khaki) uniform and is armed with an early variant FN 7.62mm FAL rifle with a tubular type bayonet. Of interest is the late 1950s vintage web belt with two 20-rd. magazine pockets and six smaller pockets, each holding two five-rd. loading clips. His boots are the old brown leather type rather than the sand-coloured suede model.

G5: National Guardsman, Saudi Arabian King Abdul Aziz Bde.

The new French-made 112mm APILAS (Armour Piercing Infantry Light Arm System), a single-shot disposable

LAW, proved to be extremely effective against armour and buildings during the battle of Al-Khafji. This 9-kg. weapon has a maximum effective range of 500 metres. The German-made US-style helmet is sand-coloured under the US pattern four-colour earth tone camouflage cover.

H1: Junior sergeant, Czechoslovak Chemical Protection Company

The 206 Czechoslovak chemical protection troops deployed to Saudi Arabia in mid-December were an important goodwill gesture by the former Warsaw Pact state. They wore the new light OG field uniform rather than the traditional Warsaw Pact 'raindrop' camouflage. A new style thigh-length field jacket, the same dark OG shade as the cap, was also issued. On the shoulder is the long-used national insignia supplemented by a national title. Standard subdued insignia are worn on this junior sergeant's (*rotny*) cap and shoulder straps. The nylon belt and combat knife (with a file and hacksaw blade in the scabbard) are new designs, but the Vz.59 assault rifle magazine pouch is the old standard. They used the OG FOP-85 chemical suit and M-10M mask, similar to the US M17A1.

H2: MP NCO, Pakistani 7th Armd. Bde.

Pakistan deployed 11,000 troops to Saudi Arabia and another 1,000 from an infantry brigade to the UAE. The troops in Saudi included the 5,000-man 7th Armd. Bde. as a theatre reserve, plus support units and advisors. These well-trained troops wore uniforms with a distinct British influence including pattern '58 web gear. This MP corporal is armed with a West German-made 7.62mm MG-3 machine gun, while other troops used the German 7.62mm G-3 assault rifle.

H3: MP, US 92d MP Co., 2d Armd. Cav. Regt.

While the media seemed overly preoccupied with women in the combat zone, the fact that they were there cannot be ignored. Over 26,000 female soldiers served in the Gulf area, but were not assigned to combat units below brigade level. Mildly derided with such nicknames as 'BBCs' (Bleached Blondes in Combat, due to a severe shortage of hair dye), in addition to administrative and medical duties, women drove trucks, ran forward refuel points, directed artillery fire, guarded POWs; and the 101st Abn. Div. had 22 female helicopter pilots, most of whom flew missions into Iraq. A large percentage of MP units consist of women, and some of these led maneuver units through the breached enemy defenses. Some 14 female soldiers died in the Gulf area, five by hostile action; 21 were wounded/injured, and two taken prisoner. Most MP units quickly fabricated black-on-sand Naugahyde (artificial leather) brassards to replace the field black-on-OG and garrison

white-on-black versions. Saudi-made all-suede leather desert boots were purchased by many troops before the new desert boots were issued. This specialist, like all MPs, carries an M9 pistol and M16A1 rifle.

H4: Special Agent, US 3d MP Gp. (Criminal Investigation Division)

CID special agents, the MP's 'detectives', do not wear rank on their uniforms but only a 'U.S.' on the collars; in the States they generally wear business suits or more common apparel. Most are actually NCOs or warrant officers. The patch on the CID brassard is that of the Criminal Investigation Command. Brown-on-sand name tapes and sew-on skill badges were soon being sold by the Saudis, but few combat troops purchased these and they were more common in the rear. In Saudi Arabia the CID's key concerns were pilferage of supplies, antiterrorism, fatal accidents, and general crime investigation.

I1: Grenadier, US 101st Abn. Div. (Air Assault)

The DBDU's design proved to be flawed and various refinements were included in the new uniforms rapidly put into production to meet the urgent need. The refinements included deleting the shoulder yoke, elbow, knee, and seat patches and using lightweight ripstop fabric. Combat troops were issued four coats (shirts) and trousers, hat, neckerchiefs, helmet, body armour and rucksack covers, night parka with liner, and night trousers. The camouflage cover is fitted over his rucksack. The newly issued Type 2 hot-dry weather, or desert, boots combined the better aspects of the leather combat and jungle boots. The uppers are nylon with a soft leather collar around the inside top and the lower part made of suede. The jungle boot's steel shank and drainage eyelets were deleted and its height increased by half an inch. The grenade carrier vest has pockets for 20 HE and four pyro rounds (flare and smoke), carried in the deep chest pockets, for the M203GL mounted on an M16A2. A grenade vest of the same basic design as the ITLBV (Plate I3), carrying 14 HE and four pyro rounds, is presently under development.

I2: NCO tank commander, US 1st Tank Bn., 1st Marine Div.

Both Marine and Army tankers wore the armoured crewman's uniform though many wore DBDUs or BDUs. The new crewman's suit is similar in design to the CWU-27/P fire retardant Nomex flyer's coveralls. Both services also used the DH-132 CVC helmet (Plate B3). The Marine utility cap, traditionally called a 'cover', has been worn since World War II when it was developed from a railroad worker's cap design. These were not made in the desert camouflage until late in the conflict and few were issued.

This staff sergeant is examining a microclimate cooling system vest issued with the M1A1 tank, the only vehicle currently capable of providing conditioned air. The vest is worn under outer garments to blow cool air around the torso, and is more efficient than attempting to cool the interior of an uninsulated armoured vehicle baking in the sun. Tank crews are armed with M9 pistols and World War II designed .45-cal. M3A1 sub-machine guns ('grease gun').

I3: NCO sniper, US Special Forces

SF has shown increasing interest in stand-off target interdiction — long-range sniping — to attack sensitive targets (radar, communications, parked aircraft, etc.) and key individuals. Besides the 7.62mm M24 sniper system (Plate B2), different .50-cal. models have been tested to increase range and target terminal effects; our subject holds armour-piercing incendiary rounds. This Research Armament Industries Model 500 and the similar American Military Arms Corp. Model 5100A1 (improved RAI Model 500 — AMAC had bought out RAI) proved to be extremely effective. This single-shot, 36lb. rifle has an effective range of 1,800 metres. The Barrett Model 82A1 'Light Fifty' was also used, a semi-automatic with a 10-rd. magazine. These weapons are fitted with Ultra 10 x M3A scopes. SF troops wore DBDUs with all insignia removed, and a DBDU hat. A wide range of boots were used including these Hi-Techs and other commercial special purpose makes; SF troops are permitted much latitude in boot selection. This sergeant first class wears a sand-coloured version of the Individual Tactical Load Bearing Vest (ITLBV) issued to desert oriented SF units. Privately made combat vests are also used, often with an A-team designing and ordering a common model. A-team members carried M9 pistols, here with a modified M12 holster and extension attaching it to the trouser belt to ensure its retention in the event that equipment is shed. Other weapons used by SF include M16A2 rifles, M203 GLs, M249 SAWs, M136 LAWs, and various models of H&K MP5 sub-machine guns. Some M9 pistols were fitted with KAC silencers.

I4: Squad leader, US 3d Armd. Div. Mech.

Woodlands pattern chemical protective suits were issued along with the earlier OG 83 version. The media complained long and loud of the Army's 'failure' to provide improved suits and the new M40 and M42 protective masks. Though the Army has experienced difficulties in the development of the masks, one has to look no further than the US Congress to fix the blame for the armed forces' outdated chemical suits — in the late 1970s Congress ordered the Navy not to purchase any additional lightweight suits from the British. Navigation in the featureless desert has

long been a problem, but it is especially critical in order to maximize the effectiveness of advanced targeting and precision weapon systems. The Trimpack Small Lightweight GPS Receiver (SLGR or 'Slugger') was one of the most common of several Global Positioning System (GPS) devices that receive data from global positioning satellites to provide highly accurate location fixes. The MX-991/U flashlight is usually seen with red filters, but blue-green filters have been proved even more effective in preventing loss of night vision and cannot be detected from as far away.

I5: SAW gunner, US 24th Inf. Div. (Mech)

Many 24th 'Victory Division' troops marked a 'V' with a felt pen on the sides of their PASGT helmet camouflage covers. The helmets are referred to simply as 'Kevlar', after its material, or 'bone domes'. Most troops wear rank insignia either pinned or sewn on the front of the helmet cover; their last name is usually marked on the camouflage band. The bands are issued with two fluorescent 'cat's' or 'ranger eyes' sewn on the back. A personnel marker light, holding a cyalume lightstick, is attached to his suspenders; coloured 'chemlights' are used for a wide range of night marking tasks. The M249 SAW proved to be an excellent weapon in its first combat tests in Panama and Iraq. One modification desired by its users is to replace the 200-rd. belt plastic magazine with a 100-rd. nylon 'softpack'.

J1: Iraqi MP, Kuwait City

Predominantly green camouflage patterns, like these British DPM trousers, were common in the Iraqi forces, regardless of the desert environment in Kuwait and southern Iraq, as many of the areas where the Iran-Iraq war was fought were foliated. This MP, identified by his distinctive helmet, wears a British style 'woolly pully' sweater, common issue to regular troops. He is armed with a folding stock AKMS assault rifle.

J2: Mech. infantryman, Iraqi Republican Guard

French-made export four-colour desert pattern camouflage uniforms were widely issued to the RG along with British export desert DPM uniforms. The equipment is Pakistani-made pattern 58 with three-pocket magazine pouches made specifically for AK assault rifles. The bright red lanyard was worn by all RG personnel, sometimes even in the field. Solid black and various two-colour lanyards were worn by some other personnel, though their significance is not known; it has been suggested that they identify instructors and cadres. The RG also wore the maroon beret with service uniforms. Other colours of berets were seen, but their meaning is unknown. Black was used by several different organizations including some special

forces and possibly Ba'ath Party political officers. Red, green, blue (bright shades), and brown berets may identify the various security forces.

J3: Iraqi infantryman

The vertically striped 'lizard' pattern camouflage, possibly from Syrian sources, was not widely issued. It was very common, even in RG units, to mix shirts, jackets, and trousers of different camouflage patterns, or OG garments with camouflage. A wide variety of field caps and winter pile caps were used. Chest magazine pouches (three magazine pockets, four accessory pockets), in both khaki and OG, were common, especially among mechanized personnel and tank crewmen, with no other equipment being carried. The insert (3a) is the Iraqi Ministry of Defence, Department of Ordnance logo seen on most indigenous clothing and equipment items. The character within the triangle is a stylized Arabic letter 'J' for *Jaish* (Army).

K: Coalition Aviation:

The Coalition's vast helicopter resources proved to be a major asset, contributing greatly to the victory. Helicopters executed countless offensive, air assault, reconnaissance, fire direction, forward resupply, cargo transport, command and control, liaison, medevac, and air rescue operations with minimal losses.

K1: British 4th Regt., Army Air Corps

This Lynx AH Mk 1 attack helicopter crewman wears his AAC light blue beret with the regimental badge, worn by all AAC personnel below the rank of colonel. Besides the pilot's badge, other air crewman qualification badges include air gunner and air observer. AAC senior NCOs

wear a small light blue eagle edged in dark blue above their chevrons. The insert (1a) depicts the AAC patch worn on the right shoulder. Suede desert boots were commonly worn with the flight suit.

K2: French 3rd Helicopter Combat Regt.

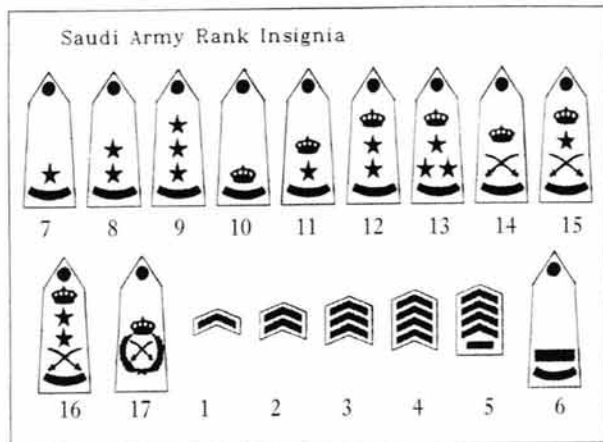
Both the 1st and 3^e RHCs, augmented by elements of the 5^e RHC, were drawn from the 4th Airmobile Div., basically an antitank helicopter formation. This Ground Army Light Aviation (ALAT) Gazelle SA-342 antitank helicopter crewman is clad in the standard tan flying suit with a Type 316SP flying helmet. The ALAT wears a royal blue beret with a silver winged star enclosed in a ring over the right temple. The insert (2a) is the 3^e RHC's unit/branch badge *écusson* worn on the left sleeve; the same design is worn by all RHCs. Standard black combat boots were worn with this flying suit.

K3: Canadian Forces Air Crewman Protective Suit

Protection from Iraqi chemical agents was a major concern of all coalition forces, and no less for aviation personnel. This is but one example of efforts taken to reduce the threat. As frequent participants in UN peacekeeping operations the Canadian Armed Forces have long sought improved chemical protection equipment. This ensemble includes the Exotemp CD2 cooling system vest, a long-sleeve underwear shirt with plastic tubing sewn into the fabric through which chilled water is circulated, allowing crews to fly three times longer than with conventional protective suits. Under this Sea King pilot's right hand is the system's ice-water reservoir and pump. Over the cooling vest is worn the same layered chemical protective suit as used by US Marine and RAF air crews. He also wears a

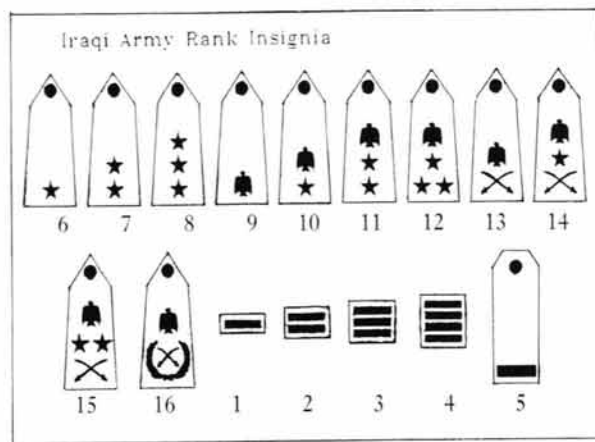
A group of Iraqi Republican Guard tankers and mechanized infantrymen after the cease-fire. They wear an assorted mix of uniforms including British-style European DPM and French-style 'lizard' pattern camouflage plus various OG garments. The man in the foreground wears a black beret, and Soviet-made tanker helmets can be seen in the background. (Gary Curtis)





Saudi Arabian Army rank insignia. Enlisted field insignia are black on khaki while officers' are black metal. The officers' titles (inverted arch) reads 'Saudi Arabia'. NCOs sometimes wear plain straps with the title. (Private/Jundi has no insignia.) (1) Lance corporal/Jundi Awwal; (2) Corporal/A'rif; (3) Sergeant/Wakil Raqib; (4) Staff sergeant/Raqib; (5) Master sergeant/Raqib

Awwal; (6) Sergeant major/Ra'is Ruquba; (7) 2nd lieutenant/Mulazim; (8) 1st lieutenant/Mulazim awwal; (9) Captain/Naqib; (10) Major/Ra'id; (11) Lieutenant colonel/Muqaddam; (12) Colonel/'Aqid; (13) Brigadier/'Amid; (14) Major general/Liwa'; (15) Lieutenant general/Fariq; (16) General/Farioq awwal; and (17) Field marshal/Mushir. (US Army)



Iraqi Army rank insignia. Enlisted field insignia are black on khaki. Officers' field insignia are generally stencilled yellow on OD while service insignia are generally gold coloured metal. Officers of the General HQ wear a red-orange band at the shoulder strap base. (Private/Jundi has no insignia.) (1) Lance corporal/Jundi Awwal; (2) Corporal/Na'ib 'Arif; (3) Sergeant/'Arif; (4) Staff sergeant/Ra'is Urafa; (5)

Sergeant major/Na'ib 'Dabit; (6) 2nd lieutenant/Mulazim; (7) 1st lieutenant/Mulazim awwal; (8) Captain/Naqib; (9) Major/Ra'id; (10) Lieutenant colonel/Muqaddam; (11) Colonel/'Aqid; (12) Brigadier/'Amid; (13) Major general/Liwa'; (14) Lieutenant general/Fariq; (15) General/Farioq awwal; and (16) Field marshal/Mushir. (US Army)

combination survival/life vest with a new airman's protective mask and hood system incorporating its own air cooling system.

L: Kuwait, 24 Feb. 1991:

The much touted Iraqi defences proved to be only a hollow shell or, in many cases, death traps for their defenders, often abandoned by their officers and cut off from supplies. Many positions were weakly constructed and shallow, with only light overhead cover. In many cases weapons were poorly sited and lacked mutual support. Obstacles were poorly constructed, lacking depth, and often were not covered by fire. Coalition engineers had little trouble breaching the wire, mines, and ineffective fire pits. After the beginning of the air war the Iraqis realized that vehicles attracted air attack; many were abandoned with the lights and batteries stripped for use in bunkers. Kuwaiti communities were stripped of rugs and doors, used to line

bunker walls and as bunks. The Iraqi defences were prepared to resist an attack by infantry, as they had experienced during the Iran-Iraq war; they had failed to appreciate the massed fires and rapid tempo armoured offensive of the coalition's AirLand Battle doctrine. The US Marines, like all coalition forces, initially assaulted wearing chemical protective gear; the Marines used British European DPM No 1 Mk 4 NBC suits. The Marines issued Remington 12-ga. M870 Mk 1 shotguns on a generous scale to assault troops (L1). He is accompanied by a Kuwaiti interpreter wearing British DPM trousers and a US BDU field jacket with the Kuwaiti national badge attached. His armament is a US-supplied M16A1 rifle (L2). While camouflage uniforms were common among Iraqi RG troops, regular troops more often were issued OG uniforms. Several variants of OG lightweight field jackets, offering only limited weather protection, were provided (L3).

Notes sur les planches en couleur

A1: Plus de 20 uniformes différents sont identifiés, certains sont fabriqués sur les lieux (comme celui-ci), d'autres sont importés: la distribution dépend uniquement de la disponibilité, et non sur l'identité de l'unité. On voit de différents types d'uniforme à l'intérieur d'une même unité. Le casque est de l'Armée Ouest Allemande, les lunettes protectrices sont françaises, l'équipement en toile est du Pakistan et le fusil est roumain; le triangle rouge à l'épaule est le symbole de la Garde Républicaine. **A2:** On distribue des blouses noires ou vertes à l'équipage des chars; l'insigne de l'équipe des chars est porté à la poitrine. Les insignes des capitaines portés sur les bretelles aux épaules; un casque en toile soviétique et le pistolet Beretta sont copiés sur les lieux. **A3:** Les uniformes couleur sable ou vert sont aussi distribués. L'influence britannique est visible sur l'équipement en toile à motif '58 et le fusil L1A1. **A4:** L'uniforme de camouflage des Forces Spéciales à l'air dramatique mais prouve être peu pratique dans l'environnement du désert; le casque américain porte le blason du Koweït; ce lieutenant porte une mitrailleuse allemande H&K MP5K.

B1: Tenue américaine de cérémonie régulière de désert, l'équipement en toile ALICE et le sac à dos (aqueil on ajoute souvent les sacs M1956 ou M1961). Les nouvelles bottes en cuir résistent mieux au sable que les bottes tropicales. Ce mécanicien porte le fusil M16A1 plus ancien. **B2:** Les "Vampires" qui rôdaient la nuit le long de la frontière irakienne, portent un parka de désert pour la nuit et des pantalons pour se tenir chaud et pour se protéger des détecteurs infrarouges; à noter, le nouveau fusil de tir embusqué M24 7,62mm à lunette M3A 10x. **B3:** Les uniformes destinés pour les Européens sont en tissu de camouflage normal des 'bois' BDU, mais certaines troupes des arrières n'ont jamais reçu le style spécial pour le désert. Cet équipier d'une batterie de fusée MLRS porte le casque des véhicules de combat, le fusil M16A2, et le masque M25 des équipages à armure. **B4:** La seule différence visible avec l'Armée entente de combat sont les petits insignes métalliques couleur marron (au lieu de noir) sur le col, désignant le rang. A noter la mitrailleuse M60EG, le pistolet M9, l'armure et le casque. On distribue de grandes quantités de bouteilles en plastique d'eau minérale. **B5:** Le capitaine porte un brassard, l'identifiant comme membre du Contrôle de Mouvement, un casque et un talkie-walkie du commerce qui contribuent à l'immense effort logistique.

C1: Uniforme de combat M1964, baret vert de la Légion avec un insigne argenté REC; Ecusson de la Légion à grenade REC argenté à la manche gauche et l'insigne de la 6e DLB à la manche droite; fusil FAMAS et casque F1. **C2:** costume C86 de protection contre les armes chimiques; casque 654SP4 pour l'opérateur de la radio des chars. **C3:** Le képi et le pullover sont réservés aux officiers de ce régiment, les insignes de la 7th Armoured Brigade appliqués aux manches; de nouvelles bottes du désert; la ceinture à motif '58 avec le sac à dos à respirateur S10 du style de l'équipement en toile '90. **C4:** Le costume de char ignifuge est porté au cours de la formation, mais il est remplacé plus tard par les mêmes corvées de camouflage NBC que l'infanterie. On ajoute parfois aux casques Rascal le tissu de camouflage qu'on trouve sur les casques d'infanterie. A noter l'étui du pistolet '90 dans sa configuration à l'épaule et les petits chevrons noirs désignant le rang.

D1: Premières corvées à motif de camouflage imprimées des couleurs marron et sable avec un rabat de poche à forme droite – le deuxième style a un camouflage moins régulier et les rabats pontus. L'armure de corps avec la bretelle de dégagement rapide qui pend le long du côté gauche. On porte de différentes sortes de bottes et des coiffes shemagh de couleurs différentes. Le brassard porte l'insigne de la 16th/17th QRL, division à laquelle est attachée cette batterie; pièce à l'épaule de la 4th Armoured Brigade; parement rouge/bleu de la Royal Artillery. **D2:** Casque Mk6 portant le nom, le rang et le groupe sanguin sur le dessus; la version tissu camouflage de désert du costume NBC Mk6; armure corporelle; les bottes du désert. L'équipement en toile est souvent un mélange, c'est à dire le type '90 à motif avec des articles du commerce tels que cet étrié Arktis à la poitrine; la bayonnette pour le fusil L24A1, le compas et les étuis de combat y sont souvent attachés. **D3:** L'insigne régimental est cousu sur le chapeau en tissu de camouflage de désert; le tricot marron est réglementé mais on trouve plusieurs autres motifs, certains portant les symboles ou les slogans des différentes unités. **D4:** Des pullovers couleur sable de distribution normale de la 7th Armoured Brigade; celui-ci porte le chevron du rang en couleurs régimentales, la pièce de la brigade, et à la gauche, le brassard 'Lion d'Ecosse', porté uniquement par l'équipage des chars dirigés par l'officier commandant. **D5:** On porte peu d'insignes sur la tenue de combat: (5A) Pièce en tissu écossais Cameron à l'épaule droite et le côté gauche du casque des Royal Scots. (5B) Insigne sur les bretelles aux épaules des Royal Fusiliers. (5C) Parement des Guards porté à l'épaule droite par les Scots Guards, sur le côté gauche du casque par les Coldstream. (5D) Le 'Blackadder' est la pièce non-officielle portée par le personnel des arrières, les camps desquels étaient nommés d'après les caractères d'une émission comique britannique.

E1: Comme dans la plupart des contingents alliés, les costumes NBC sont gardés comme protection contre le mauvais temps, même si la menace des attaques aux armes chimiques ne se matérialise pas. Armure normale des troupes françaises et le casque est couvert du nouveau tissu de camouflage. **E2:** Nouvel uniforme du désert et l'écharpe typique du désert, portée avec la nouvelle armure. **E3:** Les bécots rouges sont portés par la Parachute Artillery.

F1: Nouvel uniforme de camouflage distribué aux environs de 1989, avec un couvre-casque soviétique '68 à motif. La copie du fusil AKM fabriqué sur les lieux est armé d'un déchargeur à grenades pour les grenades RG42; l'équipement a un étui intégral pour les munitions, une bouteille à eau et un masque à gaz. **F2:** Les vestes insulées vertes avec des capuches sont disponibles en vert ou à motif de camouflage; les casquettes de 'base-ball' et de brosse en tissu de camouflage sont très communes. Ce caporal de l'infanterie mécanisée porte une mitrailleuse RPD et est habillé d'une manière très semblable aux membres de l'équipage des chars de sa division, sauf qu'ils portent des casques de l'équipage US. **F3:** L'habillement syrien, le casque soviétique '68, équipement style chinois avec quatre étuis de magasins; l'insigne du

Farbtafeln

A1 Mehr als 20 verschiedene Tarnuniformen wurden identifiziert, teils örtlich hergestellt (wie hier) oder importiert; die Ausgabe hing von der Verfügbarkeit ab, nicht von der Identität einer bestimmten Einheit, und man konnte verschiedene Uniformen in derselben Einheit sehen. Westdeutscher Helm, französische Schutzbrillen, pakistanische Gurte, rumänisches Gewehr; das rote Schulterdreieck kennzeichnet Mitglied der Republikanischen Garde. **A2** Schwarze oder grüne Panzerbesatzungs-Overalls wurden ebenfalls ausgegeben; siehe Panzerabzeichen auf der Brust, und Hauptmanns-Insignien am Schulterriemen; sowjetischer Segeltuchhelm und lokal nachgebaute Beretta-Pistole. **A3** Auch sandfarbene oder grüne Uniformen wurden ausgegeben. Der britische Einfluß ist an den Gurten von 1958 und an dem Gewehr L1A1 erkenntlich. **A4** Die Tarnuniform der Sondereinheiten sah dramatisch aus, war aber unpraktisch für den Wüsteneinsatz; der US-Helm trägt das Wappen von Kuwait, und dieser Leutnant trägt eine deutsche H&K MP5K-Maschinenpistole.

B1 Standardausgabe einer US-Wüstenumform mit ALICE-Gurten und Rucksack (oft ergänzt mit kleineren Tragen M1956 oder M1961). Die neuen Lederstiefel waren "sanddichter" als die Tropenstiefel. Dieser Pionier trägt das ältere M16A1-Gewehr. **B2** Die sog. "Vampires", die nachts an der irakischen Grenze patrouillierten, trugen die nächtliche Wüsten-Parka samt Hose gegen die Kälte und auch gegen Infrarot-Spähgeräte; siehe neues 7,62mm-Scharfschützengewehr M24 mit M3A-Zielfernrohr (10-fache Vergrößerung). **B3** Einheiten für den Einsatz in Europa trafen in Standard-Wald-Tarnuniformen BDU ein, und manche Nachhut-Einheiten erhielten niemals die Wüsten-Version. Dieses Mitglied einer MLRS-Raketenbatterie trägt den DH-132-Helm von Kampffahrzeugbesatzungen, ein M16A2-Gewehr und die M25-Maske eines Panzerfahrzeug-Soldaten. **B4** Der einzige sichtbare Unterschied gegenüber der Armee in Felduniform sind kleine braune (anstatt schwarze) metallene Rangabzeichen am Kragen. Siehe Maschinengewehr M60EG, M9-Pistole, PASGT-Kugelschutz und Helm. Plastik-Mineralwasserflaschen wurden in großen Mengen ausgegeben. **B5** Hauptmann, mit Armband des Einsatzkontrollpersonals und einem kommerziellen Helm und Gegensprachergerät; assistierte bei den enormen logistischen Aufgaben.

C1 Felduniform M1964, grüne Legionskappe mit silbernem REC-Abzeichen; Legions-Ecusson mit silbernem REC-Granate am linken Armel, Abzeichen von 6.DLB am rechten; FAMAS-Gewehr und F1-Helm. **C2** C86-Schutzanzug gegen chemische Kriegführung; Panzer-Funkhelm 654SP4. **C3** Typische Kappe und Pullover für Offiziere dieses Regiments, mit Abzeichen der 7. Gepanzerten Brigade am Armel; neu ausgegebene Wüstenstiefel; Gürtel von 1958 mit S10-Rucksack-Atemgerät an Gurten von 1990. **C4** Grüner, feuerfester Panzeranzug, ursprünglich getragen, aber später ersetzt durch Tarnkleidung und NBC-Anzug wie Infanterie; Rascal-Helme von Panzerfahrzeugbesatzungen hatten manchmal die Tarnauflage der Mk.6-Infanteriehelme; Pistolenhalter im Stil von 1990 in Schulterausführung; siehe kleine schwarze Winkel als Rangabzeichen.

D1 Erste Version der Tarnuniform – braun auf Sandfarbe – und gerade Taschenklappen an den Beinen; die zweite Ausgabe hatte weniger braunen Farben und spitz zulaufende Klappen. Kugelschutz mit Schnellöffnungsriemen an der linken Vorderseite. Viele verschiedene Versionen und kommerzielle Stiefel wurden getragen, ebenso wie verschiedene Farben des arabischen Kopftuchs Shemagh. Armbinde mit Abzeichen des 16./17. QRL, zu dem diese Batterie gehörte; Schulterabzeichen der 4. Gepanzerten Brigade und rot-blaues Abzeichen der Royal Artillery. **D2** Mk.6-Helm mit Name, Rang und Blutgruppe auf der Hülle; Wüsten-Tarnuniformversion der Mk.6-NBC-Uniform; Kugelschutz, Wüstenstiefel. Gürtelanordnung war oft gemischt – Ausgabe von 1990 zusammen mit kommerziellen Stücken wie diesem Arktis-Brustanzug; Bajonett für Gewehr L24A1, Kompaß und Wundverbandstaschen waren oft daran befestigt. **D3** Regimentsabzeichen auf Wüsten-Tarnhaube aufgenäht; braunes Standard-Unterhemd, doch gab es auch oft andere Muster, manchmal mit Einheits-Abzeichen oder Slogans versehen. **D4** Sandfarbige Pullover waren Standardausrüstung in der 7. Gepanzerten Brigade; **D5** Auf der Felduniform wurden wenig Insignien getragen: (5a) abzeichen der Royal Scots – Cameron-Tartan, rechte Schulter, links am Helm. (5b) Schulterriemen-Insignien der Royal Fusiliers. (5c) Guards-Abzeichen, getragen auf der rechten Schulter von den Scots Guards, links am Helm von den Coldstream Guards. (5d) "Blackadder" – inoffizielles Abzeichen der Nachhut-Einheiten, deren Lager nach Gestalten aus heiteren Fernsehserien benannt wurden.

E1 Wie in den meisten Kontingenten der Alliierten wurden NBC-Anzüge weiterhin als Wetterschutz getragen, auch nachdem die Drohung chemischer Kriegführung sich nicht verwirklichte. Kugelsichere Westen französischer Standard-Ausgabe, Helm mit dem neuen Wüsten-Tarnbelag. **E2** Neue Wüsten-Tarnuniform, typisches Wüsten-Halstuch, getragen mit der neu ausgegebenen kugelsicheren Weste. **E3** Rote Kappen werden von der Fallschirmjäger-Artillerie getragen.

F1 Neue Tarnuniform, Ausgabe ca. 1989, mit Belag für sowjetischen Helm von 1990. Örtlich nachgebautes AKM-Gewehr mit Granatwerferaufsatz für RG42-Granaten; Gurten mit eingebauten Taschen für Munition, Wasserflasche und Gasmaske. **F2** Gasfeste Jacken mit Kapuzen wurden in grüner und in Tarnausführung ausgegeben; Tarn-Kopfbedeckungen in Form von Baseball-Kappen oder Buschhüten waren weit verbreitet. Dieser mechanisierte Infanterie-Gefreite mit RPD-Maschinengewehr ist mehr oder weniger wie die Panzersoldaten seiner Division gekleidet, die allerdings US-Helme trugen. **F3** Syrische Tarnkleidung, sowjetischer Helm von 1968, Brustgurten nach chinesischer Art mit vier Munitionstaschen; hauptmanns-Rangabzeichen an Schulterriemen; Totenkopf/Schwerer-Kommandoabzeichen sowohl mit schwarzem als auch rotem Hintergrund – dies konnte also eine zusammengesetzte Einheit gewesen sein. **F4** Nationalflaggen-Abzeichen auf der linken Brustseite von Panzer-Overalls unter einem alternativen Gurtenarrangement mit nur drei Haupttaschen. Dieser Panzersoldat würde eine sowjetische SchM-41-Gasmaske mit kurzen Filterkanister, sowie ein AKMS-Gewehr erhalten haben.

range de capitaine sur les bretelles aux épaules; on voit des insignes de commando à tête de mort ou épée colorés en noir ou en rouge, alors on pense que celle-ci est une unité composée. **F4:** La pièce avec un drapeau national sur le côté gauche des blouses de chars, portée sous une autre toile avec seulement trois poches principales. Cet équipier des chars porte le masque à gaz soviétique SchM-41 à filtre court et un fusil AKMS.

G1: Ces tenues ressemblent beaucoup au style américain, ainsi que l'équipement de toile, bien qu'on voit ici des poches à deux magasins caoutchoutés allemandes et une bayonnette G33; à noter le masque à gaz US M17A1 attaché avec une sangle à la jambe. La casquette de combat raide et les insignes nationaux aux épaules sont portés par certains sous-officiers; les fusils H&K G33E sont ordinaires. **G2:** Une coiffe de style français est distribuée à cette brigade qui conduit des véhicules français mais l'autre brigade porte le style américain; le sous-officier supérieur figuré ici porte une mitraillette H&K MP5 comme tous les équipiers des chars et de l'infanterie motorisée. **G3:** Cet officier d'étal major au quartier général porte le béret noir de l'Arabie Saoudite, l'insigne national et le pullover de couleur camouflage distribué de manière générale à tous les rangs. **G4:** Uniforme de camouflage désuet, fusil FN-FAL et l'équipement en toile des années 1950 – à noter les deux poches de magasins et six poches plus petites pour les chargeurs individuels – ceux-ci sont portés par la National Guard à la deuxième ligne de combat. **G5:** Certaines troupes de la National Guard ont été en combat comme cot opérateur à Khafji, et ils portent les uniformes et l'équipement les plus modernes.

H1: Uniforme de combat vert-clair, une ceinture et un couteau de combat; mais sinon le sfournement et les insignes de ce sergent junior sont réguliers du Pacte de Varsovie. **H2:** Les uniformes du Pakistan illustrent l'influence britannique bien que certains armes soient allemandes. **H3:** Plusieurs femmes sont de service dans les unités MP, et d'autres rôles les emmènent aussi près de la ligne de combat, certaines étaient pilotes d'hélicoptères; cinq d'entre-elles ont trouvé la mort et 22 ont été blessées par les forces ennemies. **H4:** Les détectives de la US Army Military Police ne portent pas les insignes de rang d'habitude. Les étiquettes marrons marquées avec les noms en couleur sable et fabriquées sur les lieux, ainsi que les autres insignes, sont plus habituellement portées par les troupes des échelons arrière que parmi les unités de combat.

I1: Le DBDU d'origine était fabriqué d'un tissu trop lourd; on fabrique rapidement une version améliorée d'un tissu en nylon léger, sans renforcements aux coudes, genoux et au siège. On améliore aussi les bottes de type 2 en enlevant les trous d'assèchement (qui laissent rentrer le sable) et les protections en acier des bottes de jungle (qui surchauffent les pieds). **I2:** Ces casquettes de corvée sont portées uniquement par les Marines, mais les bluses insignifiées sont portées par l'Armée ainsi que les Marines. Ce sous-officier examine un tricot refroidisseur distribué seulement aux équipages des chars. **I3:** Le nouveau modèle de fusil de tireur embusqué RAI Modèle 500 en .50cal – très puissant et précis mais aussi très lourd, pesant 16,3kg et donc limité aux détachements des Forces Spéciales. Les uniformes non-désignés et une grande variété d'équipement réglementé ou bien acheté par les particuliers est typique des Forces Spéciales; à noter le tricot renforcé couleur sable distribué aux troupes spéciales pour les travaux dans le désert. **I4:** Les costumes à motif des 'bois' sont encore distribués. Le Trimpack SLGR est un appareil de navigation à utiliser avec les signaux de satellite. **I5:** Le 'V' sur le casque signifie la 24th 'Victory' Division; les insignes de rang et de nom sont épinglés sur le devant et les clus fluorescents appliqués à l'arrière des rangées sont là pour aider les troupes qui suivent à garder leur position pendant la nuit. On utilise aussi plusieurs sortes d'éclairages chimiques.

J1: La plupart des uniformes de camouflage irakiens sont verts malgré l'environnement de désert; comme les pantalons DPMS, ce pullover est d'un style britannique. Son casque signifie qu'il est de la Police Militaire. **J2:** Uniforme de camouflage fabriqué par les Français; équipement en toile du Pakistan; le cordon écarlate de la Garde Républicaine. Les Guards portent parfois des bérets couleur bordeaux mais l'existence d'autres couleurs (noir, vert, bleu et marron) est difficile à expliquer. **J3:** La majorité des troupes portent un mélange désordonné d'habits de camouflage de types variés. Cependant ce motif en lézard vertical, peut-être syrien, est rare. L'équipement en toile à la poitrine est universel, même parmi les équipages des chars. (3A) La marque de l'artillerie irakienne est trouvée sur les habits et l'équipement.

K1: Ld béret AAC bleu-clair et l'insigne de Corps; l'aigle est répété en toile au dessus des chevrons du sous-officier supérieur. On porte plus souvent les uniformes de camouflage pour le désert que les complets d'aviateurs. **K2:** Complet d'aviateur réglementaire couleur peau. Casque de type 316SP; (2A) Ecusson à la manche gauche de la troisième RHC. **K3:** Protection chimique par dessus le tricot refroidisseur à eau CD2; tricot de survie; nouveau masque d'aviateur avec capuche.

L1: US Marine portant la tenue britannique No 1 Mk 4 ainsi que le fusil de chasse Remington M870 distribué de manière générale. **L2:** Un interprète du Koweït porte la veste US BDU et les pantalons britanniques DPM. **L3:** Typique de plusieurs modèles de vestes de combat vertes distribuées aux troupes irakiennes, n'offrant qu'une protection limitée pour l'hiver.

G1 Uniformes très ähnlich dem US-Stil, ebenso Gurte, obwohl hier deutsche Gummi-Munitionstaschen für je zwei Magazine und ein G33-Bajonett zu sehen sind; siehe US-Gasmaske M17A1, ans Bein geschnallt. Steife Feldkappe und Schulterinsignien, getragen von manchen Unteroffizieren; H&K-G33E-Gewehre gehören zur Standard-Ausrüstung. **G2** Kopfbedeckungen französischer Art für diese Brigade, die auch französische Fahrzeuge fuhr; US-Kappen bei anderen Brigaden; der hier gezeigte Feldweibel trägt wie alle Panzerbesatzungen und motorisierte Infanteristen eine H&K-Maschinenpistole MP5. **G3** Stabsoffiziere im alliierten Oberkommando trugen schwarze Kappen der saudiarabischen Armee mit Nationalabzeichen sowie den weithin an alle Ränge ausgegebenen Tarnpullover. **G4** Veraltete Tarnuniform, FN-FAL-Gewehr und Gurte von den 50er Jahren – siehe zwei Munitionstaschen und sechs kleinere für lose Munition – getragen von Nationalgarde-Soldaten in der zweiten Frontlinie. **G5** Einige Nationalgarde-Einheiten waren im Fronteinsatz, wie etwa dieser APILAS-Soldat in Khafji, und hatten dann auch moderne Uniformen und Ausrüstung.

H1 Neue, hellgrüne Felduniform, Gürtel und Kampfmesser; ansonsten trägt dieser Junior-Sergeant die Standard-Ausrüstung und Insignien der Warschaupaktländer. **H2** Pakistanische Uniformen zeigten britischen Einfluss, die Waffen waren jedoch westdeutscher Herkunft. **H3** Viele Frauen dienten in MP-Einheiten und auch in anderen Aufgaben, die sie nahe zur Front brachten – auch als Hubschrauber-Piloten. Fünf fielen im Kampf und 22 wurden verwundet. **H4** Die Detektive der amerikanischen Militärpolizei tragen normalerweise keine Rangabzeichen. Braun/sandfarbene Namens- und andere Abzeichen waren häufiger bei Nachhut-Truppen als bei den Kampfeinheiten.

I1 Die ursprüngliche DBDU wurde aus zu schwerem Material hergestellt, die schnell ausgegeben, verbesserte Version bestand aus leichtem Nylon, ohne Verstärkungen an Schulter, Ellbogen, Knie und Gesäß. Auch die Typ 2-Stiefel waren verbessert, die Luftungsösen wurden ebenso eliminiert (sie ließen Sand eindringen) wie die Stahl-Gelenksteile der Dschungelstiefel. **I2** Feldkappe der Marineinfanterie, aber die feuerfesten Panzer-Overalls wurden von Armee und Marineinfanterie gleichermaßen getragen. Dieser Feldweibel untersucht ein kühlendes Unterhemd, das nur an M1A1-Panzerbesatzungen ausgegeben wurde. **I3:** Das neue Scharfschützengewehr RAI Modell 500 ist äußerst stark und genau, aber mit über 16kg übermäßig schwer, so daß es am besten den Special Forces vorbehalten blieb. Uniformen ohne Kennzeichen und eine Vielfalt privat gekaufter Ausrüstungsgegenstände sind typisch für die Special Forces; siehe belastungsfähige ITI-BV-Weste, sandfarbig, ausgegeben an Sondertruppen für den Wüsteneinsatz. **I4** NBC-Anzüge mit normalem Tarnmuster wurden immer noch ausgegeben. Das Trimpack SLGR ist ein Navigationsgerät zur Verwendung mit Satellitensignalen. **I5** Das "V" auf der Helmseite bezieht sich auf die 24. "Victory"-Division; Rangabzeichen und Name sind vorn markiert oder angebracht, und Leuchtblenden an der Hinterrseite des Bandes bieten den nachfolgenden Männern Sicht bei nächtlichen Manövern. Verschiedene chemische Lichtquellen waren ebenfalls weiterverbreitet.

J1 Die meisten irakischen Tarnuniformen waren trotz der Wüstenumgebung grün; wie die DPMS-Hose ist auch der Pullover in britischem Stil. Sein Helm identifiziert diesen Militärpolizisten. **J2** Französisch hergestellte Tarnuniform, pakistansich hergestellte Gurte, scharlachrote Schnur der Republikanischen Garden. Die Garden trugen manchmal braune Kappen, doch ist die Bedeutung anderer Kappen, die gesehen wurden – schwarz, grün, blau und braun – nicht bekannt. **J3** Die meisten Truppen trugen ein chaotisches Gemisch grüner und tarnfarbiger Kleidungsstücke vieler Art; dieses vertikale "Eidechsen"-Muster – möglicherweise syrisch – war jedoch selten. Brustgurte waren fast allgemein, auch bei manchen Panzerbesatzungen. (3A) Markierungen des irakischen Artilleriekorps, gefunden auf Kleidungsstücken und Geräten.

K1 Hellblaue AAC-Kappe und Korpsabzeichen; der Adler findet sich wieder aus Stoff über den Feldweibelwinkeln. Wüsten-Tarnuniformen wurden häufiger getragen als Fliegeranzüge. **K2** Standard-Fliegeranzug, dunkelbraun, Fliegerhelm 316SP. (2A) Ecusson des 3. RHC am linken Armel. **K3** Schutzanzug gegen chemische Angriffe, getragen über CD2-Weste mit Wasseerkühlung; Notausüstungsweste, und neues Masken- und Kapuzensystem für Flugbesatzungen.

L1 US-Marineinfanterist mit britischem No.1 Mk.4-NBC-Anzug und dem weithin ausgegebenen Remington M870-Gewehr. **L2** Kuweiti Dolmetscher mit US-BDU-Jacke und britischer DPM-Hose. **L3** Typisch für die verschiedenen Arten und die frühen Feldjacken, die an die irakischen Truppen ausgegeben wurden, und die im Winter nur begrenzten Schutz boten.

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Avec annotations en français sur les planches en couleur.
Mit Aufzeichnungen auf Deutsch über den Farbtafeln.

