WAR IN THE GULF

empire
SOFTWARE

WAR IN THE GULF

empire
SOFTWARE

ACKNOWLEDGEMENTS

Coding	Ed A. H. Steven W. Green
Graphic Design	Kevin R. Ayre
Loading Sequence	Saul Marchese Mike Marchant Ed A.H.
Game Design	Steven W. Green Kevin R. Ayre Richard L. Yapp David M. Pringle
Documentation Design and Typesetting	Antony J. Bond

CUSTOMER SERVICES
Telephone: 081-343 9143
Modem Service: 081-343 7557

Empire Software
The Spires, 677 High Road, North Finchley
London N12 0DA. United Kingdom

For full details of our customer service and technical support, please refer to the separate
Product Registration and Support Card

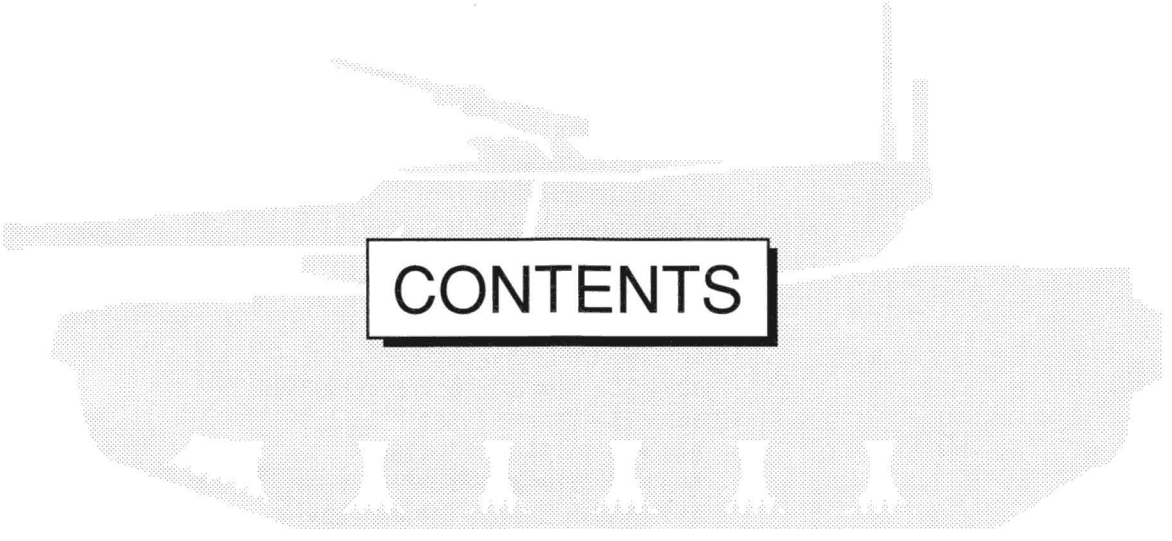
Unauthorised publication, copying or distribution throughout the World is prohibited. All rights reserved.

Empire wish to thank the Imperial War Museum, London for their help in obtaining materials for this product.

Software Copyright © 1993 Oxford Digital Enterprises Ltd.

Software published by Empire Software.

WAR IN THE GULF



CONTENTS

CONTENTS

Prologue 1
Chapter 1 - Setting Up 7
Making back-up copies 8
IBM PC and compatibles 8
Commodore Amiga 9
Atari ST 9
Chapter 2 - Controls 11
IBM PC Keyboard 12
Keyboard shortcuts 12
Chapter 3 - Start-up screen 13
Chapter 4 - Vehicle Identification 17
Chapter 5 - Battle Selection 19
Chapter 6 - Vehicle & Ammunition Purchase 21
Chapter 7 - Briefing Screen 25
Chapter 8 - Gameplay Screens 29
Quadrant Mode 30
Quadrant 3-d view 31
Map quadrant 32
Status quadrant 33
Full screen Mode 34
Full screen 3-d view 34
Full screen map view 36
Full screen status view 37
Chapter 9 - De-briefing Screen 39
Chapter 10 - How to Play War in the Gulf 41
Chapter 11 - Vehicle Types 47
M-1 Abrams Main battle tank 48
M-113 Armoured personnel carrier 48
M-2 Bradley Infantry fighting vehicle 49
M-901 Improved TOW vehicle (ITV) 49
T-62 Main battle tank 50
T-72 Main battle tank 50
BMP-2 Infantry fighting vehicle 51
BTR-60 Armoured personnel carrier 51
Chapter 12 - Glossary 53
Chapter 13 - Training Scenario 57
Chapter 14 - NATO Military Symbols 61
Chapter 15 - Facts and Figures about the Gulf War 1990-1991 63

WAR IN THE GULF

PROLOGUE

PROLOGUE

Associated Press news story, 27 February 1995

A young Israeli shot six Palestinian workers in Jerusalem today. This sparked off rioting throughout the Occupied Territories, where a further six Palestinians were killed by Israeli security forces.

The Times, London, 4 March 1995

The situation along the Gaza Strip has steadily worsened throughout the week since Monday's massacre of six Palestinians in Jersusalem. Over two hundred Palestinians and twenty Israelis have been killed in a maelstrom of rising violence, which is the worst Israel has seen in over ten years.

The Washington Post, 11 March 1995

The US has vetoed a Security Council resolution, backed by 14 out of 15 members, to send a UN team to the Occupied Territories to investigate the condition of the Palestinians. This stand is certain to cause increased tension at next week's extraordinary meeting of the Arab League.

Islamic Republic News Agency, Tehran, 17 March 1995

Today's extraordinary meeting of the Arab League in Tehran condemned the atrocities in the Occupied Territories as a 'new aggression against the rights of the Palestinian people' and 'a dangerous threat to pan-Arab security'. President Hussein of Iraq suggested that some gesture of defiance should be made, particularly against imperialist American forces so that the 'world might stand up and listen'.

Al Jumhuriya, Baghdad, 23 March 1995

The mighty and most glorious leader of the Revolutionary Council asks us all to stand up and be counted. 'Shall we not take back what is ours? The infidel Bush threw us out of our rightful home. It is time that we returned, my brothers and returned in strength. Surely the toad Clinton will not stand in our way. God is merciful, god is great.' (Translation)

State Department press release, 24 March 1995

President Clinton strongly denounces the stand of President Hussein in re-opening the territorial issues which were the cause of the Gulf War in 1990-1. 'Saddam must be made to realise that agression will not pay. It must be absolutely clear that there will be an appropriate response to any territorial violations'.

The Washington Post, 25 March 1995

Defence analysts revealed late last night that two divisions of the Republican Guard were performing 'manoeuvres' close to the Kuwait border. The exercises were to the west of Safwan, in the southern Rumaila oilfields. Tension relating to the ownership of these oilfields has been at the heart of much of the Iraq-Kuwait territorial dispute in past decades. There is currently a force of about 1,000 US troops stationed in Kuwait and they provide the backbone of the emirate's armed capabilities. Since the massive defense budget cuts of 1993-4, these troops have been funded almost exclusively by the Emir under a novel post-Cold War rapid response insurance scheme. They would therefore be expected to be in the front-line of any defensive response to a border incursion by the Iraqis.

Television news story, 30 March 1995

Late this afternoon elements of the Hammurabi and Nebuchadnezzar divisions of the Republican guard slipped over the Iraq-Kuwait border and occupied installations in the South Rumaila and Sabriya oilfields of northern Kuwait. It appears

that they met little resistance from Kuwaiti troops, since the Emir had asked all American troops to return to barracks yesterday as a 'peace-making' gesture. The scale of this invasion seems to be smaller than that of 1990, with only 3,000-4,000 Iraqi troops involved. Surprise is being expressed that the invasion did not carry further south. Analysts believe that this suggests that Iraq is genuinely intent on regaining some of its claimed territory in these oilfields.

United Nations Security Council Resolution 999, 30 March 1995

The Security Council,

Recalling and reaffirming its resolutions 660 (1990), 686 (1991), 687 (1991), 832 (1993), 977 (1995).

Noting that, despite all efforts by the United Nations, Iraq refuses to comply with its obligation to implement resolution 660 and the above mentioned subsequent resolutions concerning the territorial integrity of Kuwait,

Mindful of its duties and responsibilities for the maintenance of international peace and security,

Determined to secure full compliance with its decisions,

Acting under Chapter VII of the Charter,

1. Demands that Iraq comply with resolution 977 and withdraw immediately from Kuwait territory.

Adopted by 12 votes to two (Cuba and Yemen with one abstention (China)

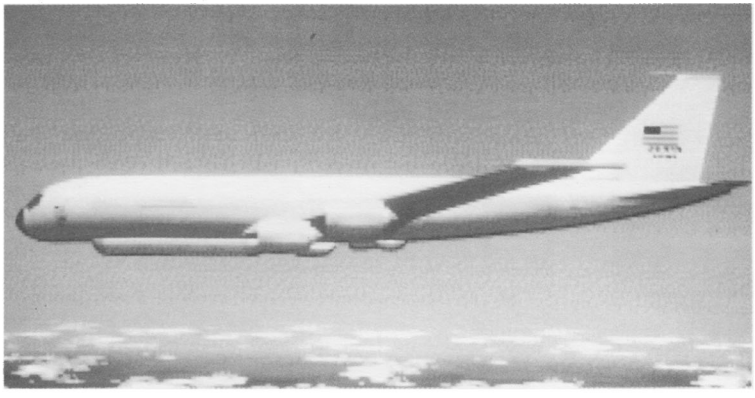
Private communication to Captain Sean Bannon, Team Kuwait, Ahmadi, 30 March 1995

To the Commander of Team Kuwait:

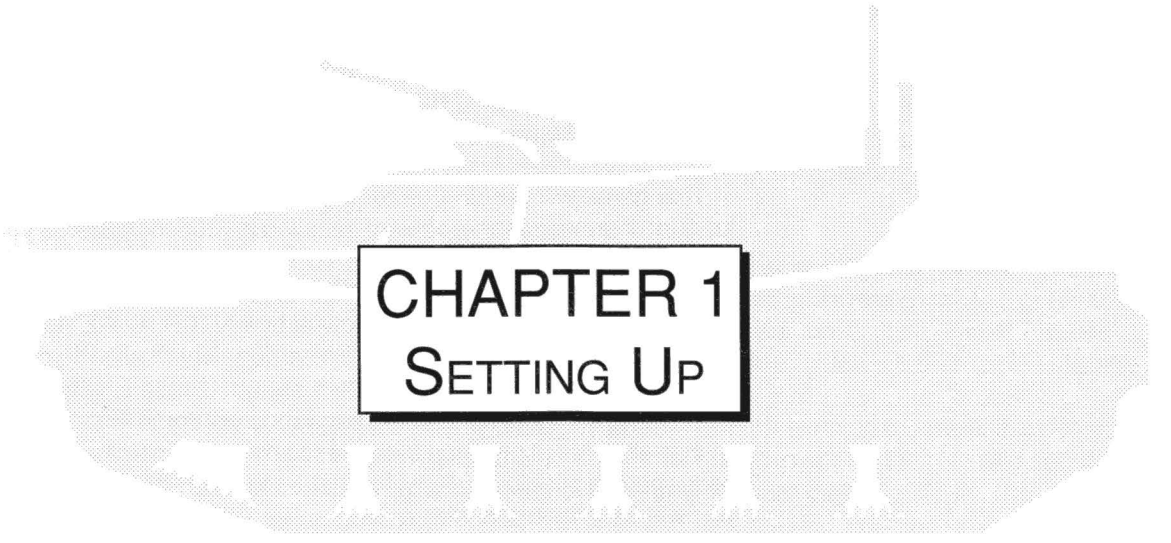
The Emir has agreed that at 09:15 tomorrow morning we will begin an offensive to re-take those parts of northern Kuwait which have been overrun by the Republican Guard. This territory includes the offshore islands of Bubiyan and Failaka whose occupation has involved surprising numbers of Iraqi troops. Team Kuwait will be asked to spearhead the assault on these two islands. If you are successful in re-taking these islands then

you should cross the Bubiyan Bridge and join up with the majority of our forces who will be involved in the oilfields of northern Kuwait. Remember that although we are under the American flag, it is the Emir who guarantees our future financing. Make sure you follow your instructions scrupulously.

Await further briefings prior to your landing on Failaka Island.



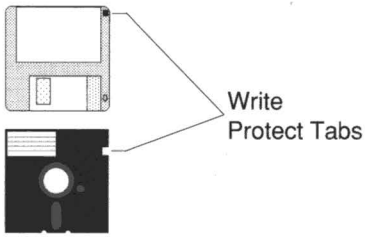
WAR IN THE GULF



CHAPTER 1
SETTING UP

1 - SETTING UP

Making a backup copy



Your game disks are unprotected, and so you are advised to make working copies of the game before you play. Before you do this, ensure that the game disks are write protected by either attaching write protect strips (5.25" disk) or opening the write protect notches (3.5" disk). Use your copies while playing the game (ensuring that they are write enabled, since information is written to disk during play) and only use the original disks for making further copies. If you are unsure how to copy a disk, read the manual for your computer. ***Remember, it is an offense to make copies of this game to give to your friends.***

IBM PC and Compatibles

War in the Gulf will run on any PC compatible which has:

- 550k or more available memory • 3.5" or 5.25" disk drives;
- EGA or VGA graphics adaptors;
- A version of MSDOS 3.0 or greater;
- Mouse (recommended) or joystick;
- A Soundblaster, Ad Lib or Roland sound board (optional).

This game will perform better if you reduce to a minimum the amount of unnecessary software installed in your computer. If you have difficulty loading the game, you may need to reduce the number of files in your AUTOEXEC.BAT program. Insert your copy of disk 1 and type GULF followed by ENTER (or RETURN). You will be presented with a set-up screen, which allows you to enter information about your system set-up. Press ENTER and after a few moments the loading sequence will commence. If you wish to skip this at any time then press any key. Once the loading sequence has finished you will be asked to insert disk 2, and then you will be presented with a filing screen. Read about how to proceed in Chapter 3.

War in the Gulf can be installed onto the hard disk of your PC. To do this place disk 1 into the internal drive (either A: or B:) and type in the following line by line instructions. These instructions will create a directory called GULF on drive C:

```
A:(or B:)
INSTALL C:
```

Then follow the on-screen instructions regarding when to swap disks. To play the game type in:

```
C:
CD \GULF
GULF
```

If you wish to install it on a different drive, then replace the C: after the INSTALL command with the pathname of where you want it installed, for example to install it in a directory d:\games\gulf, type;

```
INSTALL D:\GAMES
```

Commodore Amiga

War in the Gulf will run on any Amiga (including A600 and A1200 models) with a minimum of 512k RAM and Kickstart version 1.2 or higher. Performance will be enhanced if you disconnect all external disk drives and peripherals and ensure that no other software is running.

Turn on your computer and insert your copy of War in the Gulf disk 1 at the Workbench prompt. (A1000 users should insert their Kickstart disk first.) After a few moments the loading sequence will commence. If you wish to halt this at any time then hold down the left mouse button. Once the loading sequence has finished you will be asked to insert disk 2, and you will then be presented with a filing screen. Read about how to proceed in Chapter 3.

You can install War in the Gulf by running the Install program on disk 1. The program can be run either by double clicking on the INSTALL icon in Workbench, or by typing;

```
cd df0:
INSTALL
```

from a CLI. You will be asked where on your hard disk you wish to install the game to. You should install the game to a previously nonexistent subdirectory on your hard disk (install creates a subdirectory for you). You will need at least 1.5Mb of free storage space on your hard disk.

If you have any trouble using the install program, it is possible to install the game manually by copying all the files and subdirectories on both disks onto your hard disk.

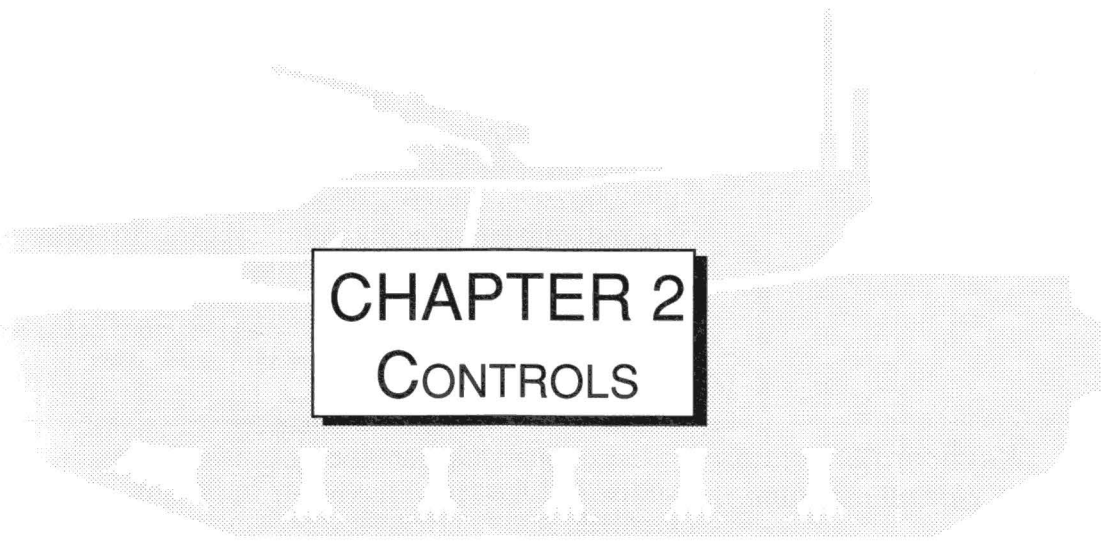
Atari ST

War in the Gulf will run on any Atari ST or STE system with double-sided disk drives, a minimum of 512k RAM and a colour monitor.

Insert your copy of the game disk into drive A and switch on the computer. After a few moments the title screen will be displayed, and then you will be presented with a filing screen. Read about how to proceed in chapter 3.

You can install War in the Gulf onto a hard disk by running the program INSTALL.PRG on the game disk. Use the file selector box to select where you want it to be installed. You will need at least 1.5 Megabytes of free space on your hard disk. To play the game double click on the Gulf.Tos icon.

WAR IN THE GULF



CHAPTER 2
CONTROLS

2 - CONTROLS

Game Pointer

The game is designed to run using keyboard, analogue joystick or microsoft compatible mouse on the IBM PC. On the Atari ST and Commodore Amiga, the game should be controlled with the mouse. In the following documentation the phrases "click on icon X" and "press fire with the pointer over icon X" are synonymous and should be taken to mean either:

[a] Place the pointer over icon X and press the fire button of the joystick (IBM PC only).

[b] Place your pointer over icon X and press the left mouse button.

IBM PC keyboard

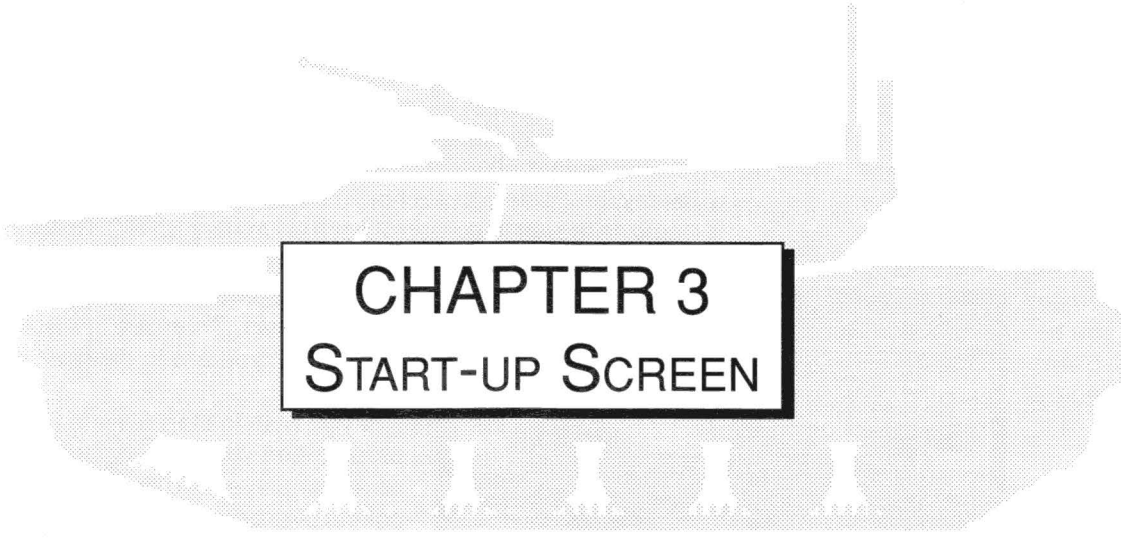
The default keys defined for direction are the CURSOR keys; the SPACE BAR for fire [left mouse button] and ENTER for the right mouse button. You may change these on the set-up screen if you wish. While you are playing the game you can use the pre-defined keyboard shortcuts listed below. Additionally, when the keyboard mode is in use you can, at any time, hold down the ALT key and press any other key on the keyboard. The position of the pointer will then be memorised and associated with that key. This position can then be recalled by holding down the CONTROL key and pressing the required key. This allows you to define a cursor position for every key on the keyboard, if you wish.

Keyboard Shortcuts (for all machines)

Using certain keyboard shortcuts instead of directly using the pointer can become a quick way to perform certain actions, especially when you are not using a mouse.

Key	Action
F1 or 1	Chose Platoon 1
F2 or 2	Chose Platoon 2
F3 or 3	Chose Platoon 3
F4 or 4	Chose Platoon 4
F7 or 7	Select map view for chosen platoon.
F8 or 8	Select 3d view for chosen platoon.
F9 or 9	Select status view for chosen platoon.
F10, F0, or 0	Toggle between map, 3d and status view for chosen platoon.
Escape	Toggle between "Quadrant" and "Full screen"
Undo (ST)	Quit Game
Delete (Amiga)	Quit Game
Help	Pause Game (ST and Amiga only)

WAR IN THE GULF



CHAPTER 3
START-UP SCREEN

3 - START-UP SCREEN

The opening screen resembles an open filing cabinet - all of the information about your battle performances can be accessed from here. Figure 3.0 shows a representation of this screen. On the front of the filing cabinet are three large icons . On the left is the **QUIT GAME** icon. If you click on this icon then you will be asked to verify whether or not you wish to quit the game. In the middle is the War in the Gulf **Language** icon, which will allow you to change the language of the text in the game. Your default language is written to disk and recalled the next time you play the game. On the right is the **PRACTICE** icon, which allows you to play a practice scenario. This scenario will familiarise you with the control of the game, without stretching your tactical expertise. It is highly recommended that you attempt to master this scenario before you pitch yourself into a full-scale battle. If you wish to practise, then go to Chapter 13, which details all about this training scenario.

There are eight files available in the filing cabinet, and each one can hold information about your campaigns. When you first start to play the game you will hold the rank of private, and the default name on the left hand side of each file marker is PFC. Bannon. On the right hand side of each file marker you will see the characters #1. This represents the first battle region in Kuwait. There are five islands to recapture if you are to conquer War in the Gulf

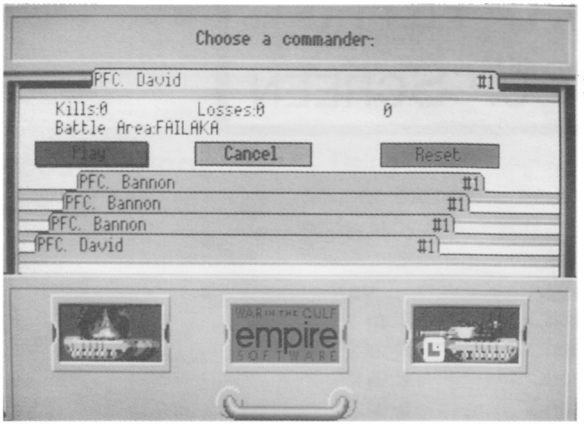


Figure 3.0 - The Start-up Screen

If you wish to start playing the game proper, then you must register yourself as a new player. To do this, locate the pointer over one of the eight file markers and press fire. The relevant file will now pop up from the cabinet, and you will be presented with all of the file contents. See Figure 3.1. Start by typing in the name you wish to use in the area at the top of the registration menu. The program will automatically append all of your combat records under this name in the filing cabinet. Underneath your name you will see recorded your strike rate under KILLS and LOSSES. This details the number of enemy vehicles you have disabled and the number of your own vehicles which have been lost. At the start, since you will not have seen any action, the KILL and LOSS values will both be 0. In the middle of the file is the name of your battle area. At

the bottom of the file there are three icons.

On the left is the **PLAY** icon which takes you into the game via the vehicle identification stage detailed in the next chapter. If you select PLAY before a name has been entered, a request box will appear asking you to register your name.

The **CANCEL** icon causes the current file to go back into the filing cabinet.

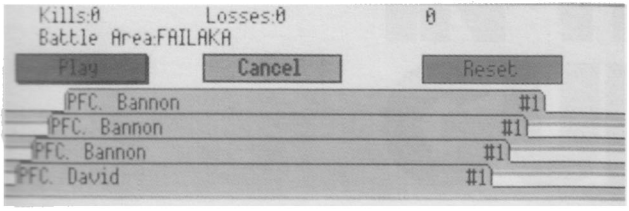


Figure 3.1
Player Registration Menu

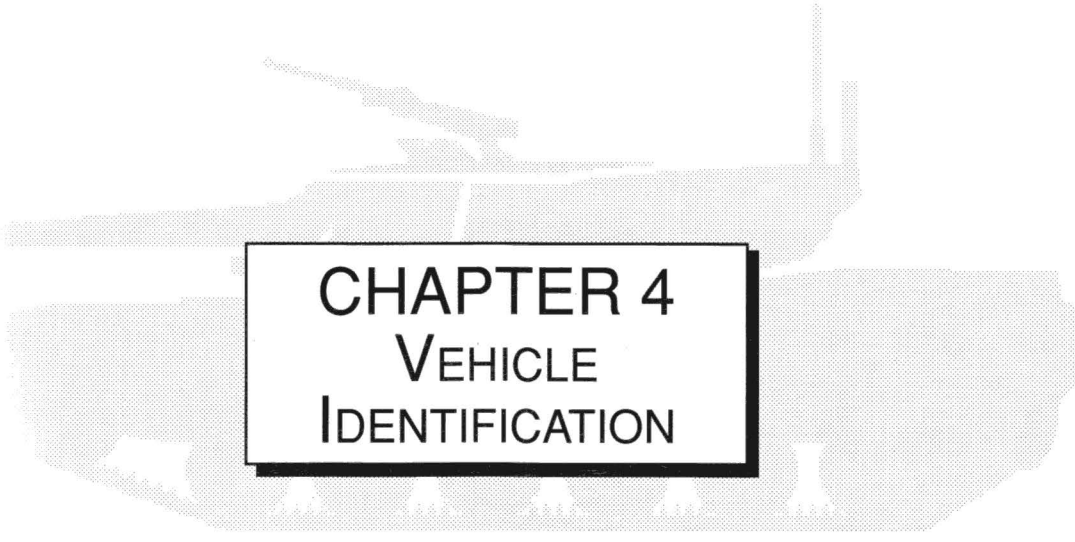
The **RESET** icon causes all of the campaign information under the current filename to be erased, in case you wish to start your campaign over again.

You may have information for up to eight different campaigns stored in your filing cabinet. All of your campaign information is automatically written to the filing cabinet at the end of each successfully completed scenario. You may only play a particular scenario at any one time as one of the characters in your filing cabinet. Once each battle has been completed, win or lose, you will return to the filing screen. If you were victorious, then your file will have appended your latest successes, and you may proceed to the next battle. If you were unsuccessful, then the information on your latest battle is erased, and you are free to start where you left off with no penalty.

Registration request box

There are four regions in the Gulf campaign. If you manage to recapture the first area, by securing all of its battle areas, then you will be rewarded with a promotion to the rank of Corporal. You will then move on to the next region. The tactical skills required will become more complex and demanding. You will have to recapture all four regions in order to completely succeed in your mission. Victory in the Gulf is not going to be simple!

WAR IN THE GULF



CHAPTER 4
VEHICLE IDENTIFICATION

4 - VEHICLE IDENTIFICATION

If you are playing the full game rather than the practice scenario, then you must make the grade at a vehicle identification class before you are allowed to commence. The screen shows the profile of a particular American or enemy vehicle from twelve different directions, with a rotating view of the same vehicle at the centre of the screen. You must identify the vehicle by clicking on the vehicle name on the right hand side of the screen.

You will be shown three successive screens with the profiles of three different vehicles, and you must identify all three correctly to proceed. You will only be asked for vehicle identification at the start of each playing session after your machine has been turned on. Figure 4.0. shows a representation of all eight vehicles.

In the mayhem of battle it is imperative that you can tell at a glance the difference between an M113 and a BMP-2, if only because if you shoot the wrong one you will be killing men who are on your own side! If you study the section in the manual on vehicle types (Chapter 11), you will receive all the information you need for vehicle identification.

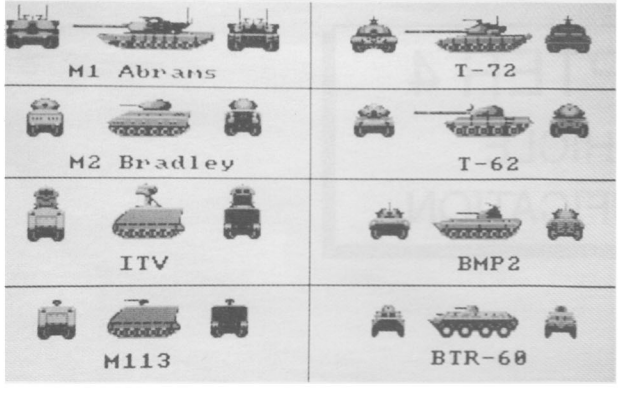
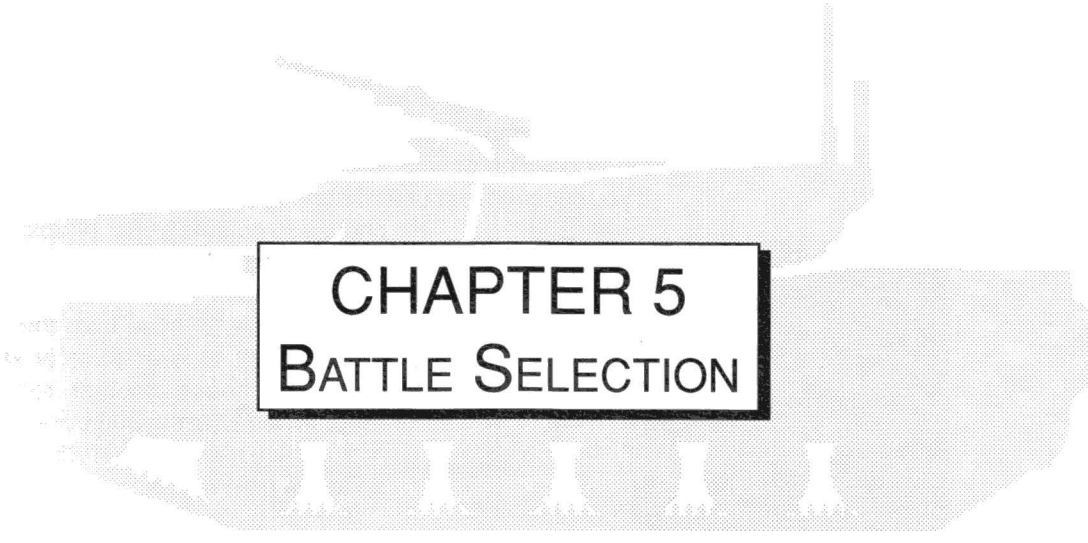


Figure 4.0

WAR IN THE GULF



CHAPTER 5
BATTLE SELECTION

5 - BATTLE SELECTION

Once you have graduated from vehicle identification you will be shown a map of your current region on the battle selection screen. This map shows all of the major terrain features of the region, with all of the roads and villages of military significance. At the start of your offensive in the region you will see two different colours of square grids overlaid on the map. Red squares represent battle areas - these are the locations where your battle scenarios will take place. Your offensive in the region will only be successful when you have succeeded in subduing Iraqi forces in all of it's battle areas. Blue squares represent those areas you are free to move over to reach the battle areas. See Figure 5.0.

The flashing blue square represents your start position. To move you must place the cursor over an adjacent square and then press fire (i.e. you can only move directly up, down, left or right, where possible). When you reach a red square and press fire you will initiate your attack on that battle area and move to the next portion of the game. The direction of your approach will determine the start position of your tank units in the battle area.

If you succeed in your forthcoming engagement, then when you choose to continue your offensive, you will find that the battle area on which you were victorious has turned yellow. You are then free to move from there over any adjacent squares (blue or yellow), until you choose another red battle area. When all of the battle areas in the region have been retaken you will move on to the next region.

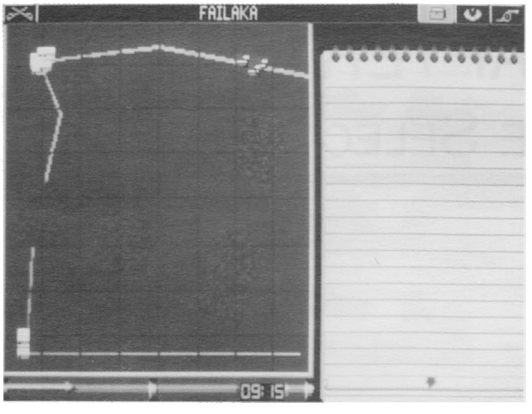
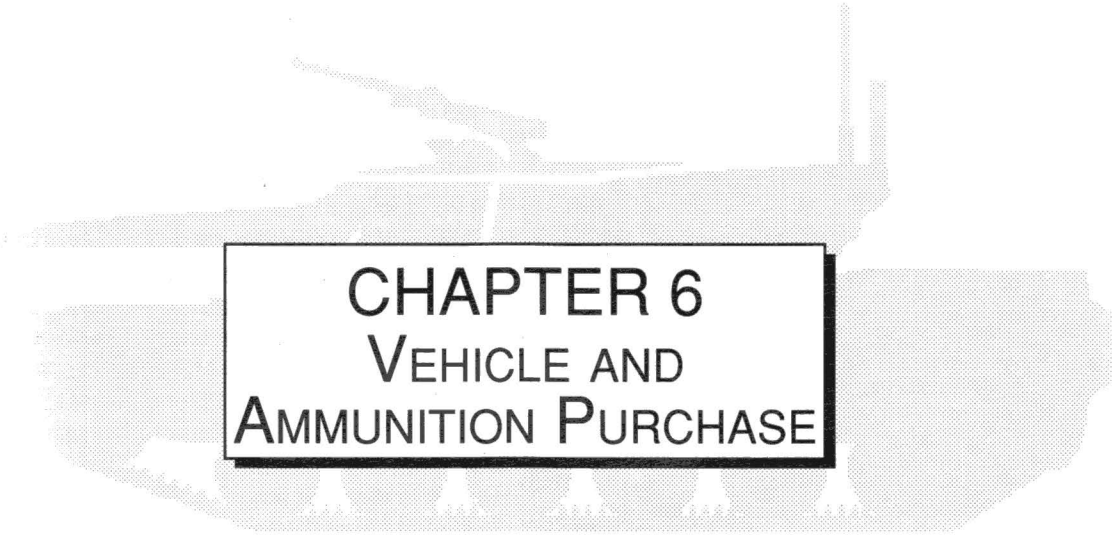


Figure 5.0
Battle Selection Screen

If your battle is unsuccessful, then you will simply return to your previous position on the map. You will suffer no penalty, and may proceed once again.

As the game progresses you will find that you have some choice as to the order in which battle areas can be attacked, or the direction from which your attack can proceed. You will have to make judgements according to all of the information you have gained, and the importance you hold on destroying communications facilities swiftly.

WAR IN THE GULF



CHAPTER 6
VEHICLE AND AMMUNITION PURCHASE

6 - VEHICLE AND AMMUNITION PURCHASE

At the start of your offensive there is a sum of money (fifty-five million dollars) provided by the Emir for the financing of your campaign. This funding is entirely under your own control, and you will be allowed to continue indefinitely until you have either won a complete victory and completely routed the Iraqis, or you have run out of money. You are not permitted an overdraft, so you must ensure that you are not too profligate with your purchases. If you are victorious in battle, or if you destroy certain key installations, then there will be further credits to your account from the Emir. But you will be debited for any gratuitous 'collateral damage' you cause during your missions, and you will have to pay to restock any vehicles damaged or destroyed, or ammunition used, during your campaign.

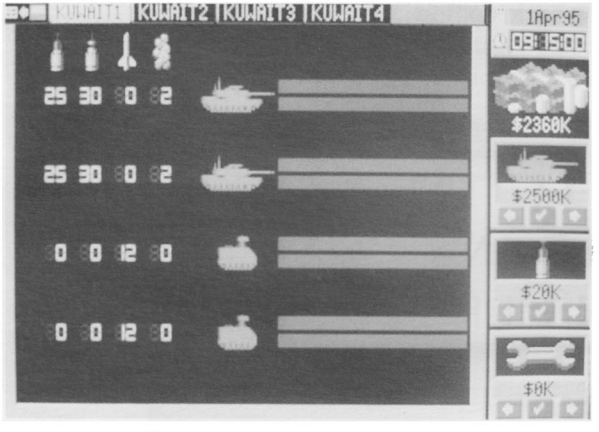
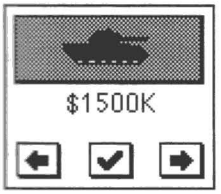


Figure 6.0
Vehicle and Ammunition Purchase Screen

The first time you reach the purchase screen (See Figure 6.0) you will be asked whether you wish to make a 'default' selection of purchases. If you answer YES, then the four units of Team Kuwait will be stocked immediately to allow you to continue swiftly towards your first battle. Unit 1 will have two M1 Abrams tanks and two ITVs. Units 2 and 3 will have four M1 Abrams each. Unit 4 will have two M2 Bradleys and two M113s. (See Chapter 11 for more details about these vehicles.) All four units will be fully stocked with ammunition. You may then continue to the next stage of the game by clicking on the icon at the top left corner of the screen.

If you do not wish to make a default selection then you are free (within financial constraints) to select whatever vehicles and ammunition you wish for your four units. Each unit may have up to four vehicles, giving a total of sixteen as the maximum number of vehicles in Team Kuwait.

Along the top of the screen are the names of each unit. The unit shaded in yellow is the one displayed in the main part of the screen. If you wish to refer to a different unit, then simply click on the name of that unit.



Purchase Icon
(vehicle)

The total sum of money in your account is displayed on the top right of the screen. This is instantly debited when you make any purchase.

There are three major icons down the right hand side of this screen:

The top icon is the **vehicle purchase icon** which allows you to buy the vehicles for your Team. Click on the arrows at the bottom of this icon to browse through the selection of all available vehicles. There are four allowed vehicle types - the world's foremost tank, the M1 Abrams; the all-purpose M2 Bradley; the M113 armoured personnel carrier and the TOW missile carrying ITV. (For further information on these vehicles read Chapter 11.) Below each vehicle you will see its purchase price. You will find that there are also sub-standard versions of each vehicle available for purchase at a cut-down price. These might prove useful if you are in financial difficulty, but be warned that these vehicles will not perform as well as their fully fitted counterparts in battle. When you have decided how you wish to stock your unit, then click on the tick at the bottom of the icon to purchase the currently displayed vehicle. You may choose up to four vehicles for each of your units, so long as you have money to pay for them. **Once you have made a purchase you will not be allowed to change your mind without cancelling the forthcoming battle and starting again. So make sure you get what you want!**

HEAT

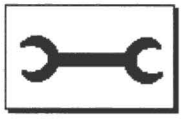
SABOT

TOW

SMOKE

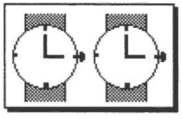
You may now stock your vehicles with weapons using the middle, **weapon purchase icon**. Use the arrows under this icon in the same manner as above to browse through the full selection of available weaponry, and use the tick to make a purchase. There are four different types of ammunition available - HEAT, SABOT, TOW and SMOKE missiles. (See the Glossary for more information on these weapons.) Each vehicle can only carry certain types of missiles, so when you make a purchase the program will automatically distribute the weapons between the relevant vehicles as it sees fit. (See Chapter 11 for information on which type of missile each vehicle may carry.) You will not be allowed to purchase unsuitable weapons, or more weapons than your vehicles can carry. Because some of the vehicles can carry many weapons (for instance a single M1 may be armed with up to 30 SABOT shells), you will find selections of groups of ten missiles, so that you do not have to purchase everything individually. You cannot buy weapons on their own - they can only be bought for previously purchased vehicles.

The lowest icon on the right hand side is the **extras icon**. There are three options accessible by clicking on the arrows. The repair option allows you to repair vehicles damaged in battle, or to repair



Repair

Morale



Time

sub-standard vehicles. Each click will repair a percentage of the damage to the vehicles in the displayed unit (for the cost displayed under the icon). When the lower bar to the right of a displayed vehicle extends to the edge of the main part of the screen it is fully repaired. The morale icon allows you to improve the morale of your vehicle crews by providing them with some R&R. This is difficult to provide in the Gulf, and therefore very expensive. The morale of the crew in any vehicle is represented by the upper bar to the right of the vehicle in the main part of the screen.

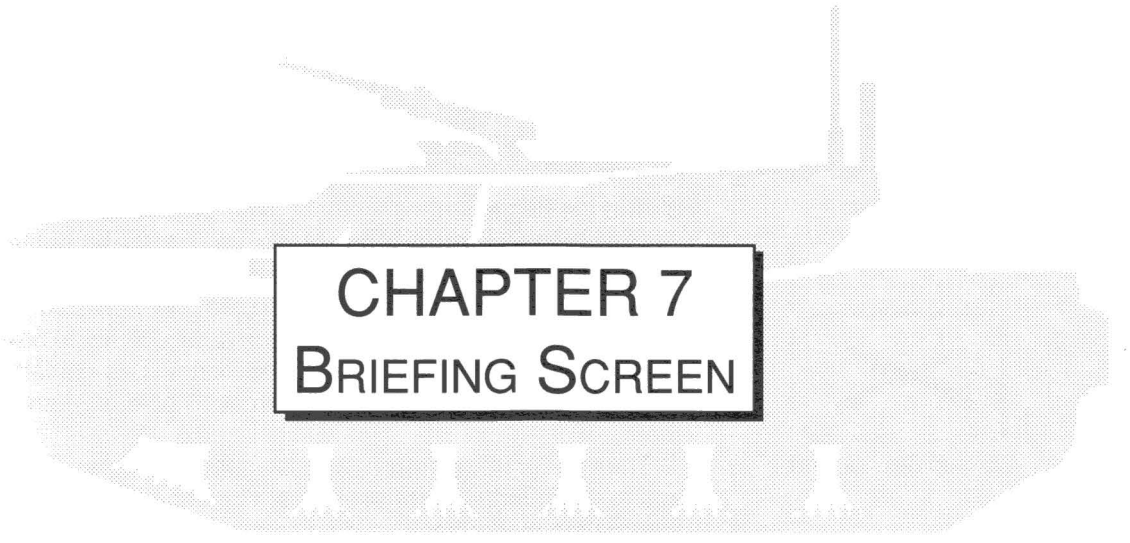
Note that incrementing both damage and morale not only costs money, but takes time. You will have to take this into account, because extra time gives the enemy more time to re-group and to counter your attack with more forces.

The time option allows you to increment the time in steps of one hour units. This allows you to decide on the time of your attack. The major use you might make of this feature is when you do not wish to make an attack at night. (It is dark between the hours of 11 p.m. and 4 a.m.)

You should ensure that you purchase vehicles AND weapons for ALL of the desired units in your Team before you move to the next screen. You are not allowed to change previously chosen vehicles.

When you are happy with your selections, you may proceed to the briefing screen by clicking on the icon at the top left corner of the screen.

WAR IN THE GULF



CHAPTER 7
BRIEFING SCREEN

7 - BRIEFING SCREEN

The briefing screen, figure 7.0, presents all of the intelligence information and command instructions for your forthcoming scenario, and also allows you to set up artillery bombardments where applicable.

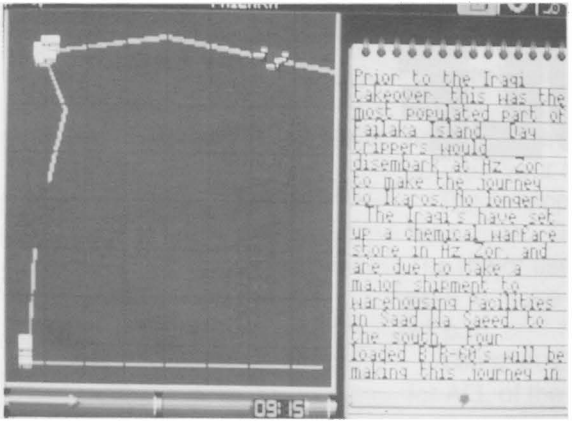


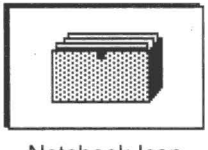
Figure 7.0
Briefing Screen

In the central part of the screen, to the left, you will see a full map of the battlefield area. This displays all of the major terrain features - forests, dunes, roads, rivers and villages. It also shows the disposition of your forces at the start of the battle. Each unit of Team Kuwait is represented by an American flag. To the right of the map is a notebook which details all of the important information available to you before the battle. You may flip through this notebook by clicking on the arrows at the bottom or top of each page, where applicable. There is nothing to prevent you from reading through the notebook as many times as you wish. Beneath the map you will see displayed the battle commencement time on an LCD display.

The **crossed swords icon** will take you into the full battle. After you have clicked on this you will be asked to confirm that you wish to go into battle. Make sure that you are fully prepared!

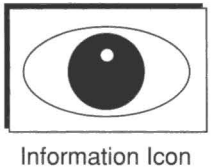
Crossed Swords Icon

The **notebook icon** reactivates the notebook if you have previously activated one of the next two icons. This contains your briefing based on all available information before your engagement.



Notebook Icon

The **eye - or information** - icon is a special feature which allows you to glean further information from the map. When you are in information mode place your pointer over the map, and you will notice that it changes shape into a cursor. If you click at any point you will notice that a flashing box will appear on the map. This box appears at the closest point of special interest relative to your cursor position. The notepad will now display the particular information about this position on the map. You will find out important facts relating to local topography when you use this feature. Alternatively, now that you are in information mode, you can look at all the special points of interest simply by clicking up or down through the notepad. When you get to a new page, the new point of interest flashes on the map.



Information Icon

Cannon Icon

The **cannon icon** allows you to set up artillery barrages or lay minefields in advance of the battle. You are not able to access artillery or mines during the battle itself. You will sometimes be allowed to create a number of separate barrages of **HE** (High Explosive), **DPICM** (Dual-Purpose Improved Conventional Munitions) and **SMOKE** shells, or to lay mines over a chosen 400mx400m area. The precise availability of artillery will depend on the particular engagement you have chosen - some battles do not allow you any artillery or mine backup. The precise details of each barrage that you set up for the battle may be varied on the overlays which appear on the notepad. By pressing either of the two arrows next to the timer on the artillery overlay, figure 7.1, you may alter the start time for a particular barrage. (This is not relevant in the case of laying mines.) Clicking on the red cross stops any chosen barrage from taking place.

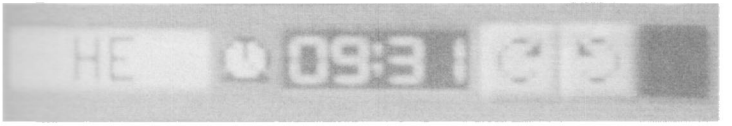
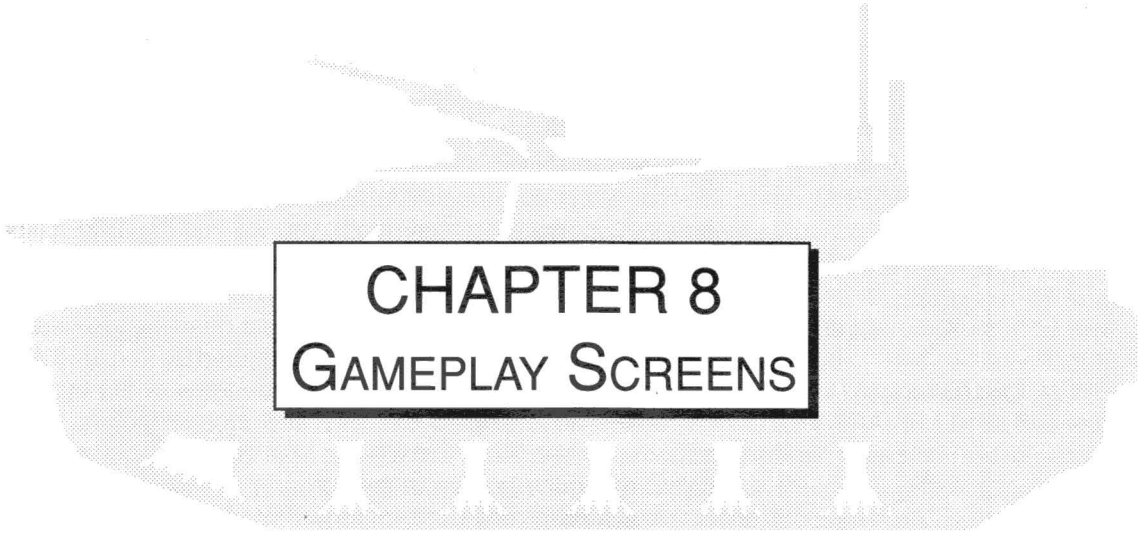


Figure 7.1
Artillery Overlay

The location for a particular barrage is shown by a flashing yellow square on the map. This location may be changed by moving the cursor over the map and clicking at the desired position. For further information on the available artillery types, please read the glossary near the end of the manual.

WAR IN THE GULF



CHAPTER 8
GAMEPLAY SCREENS

8 - THE GAMEPLAY SCREENS

You have access to all 16 vehicles in Team Kuwait, and you are going to have to become proficient at managing all of them. In either quadrant mode, when all four platoons may be controlled at once, or full-screen mode, when the display homes in on just one platoon, you have the flexibility to display either an overhead map view of the surrounding area, a simulated 3-d view of the battlefield, or a status screen showing the performance of all vehicles in a platoon. Irrespective of which screen mode you choose during battle, there is a constant column of information to the right of the screen.

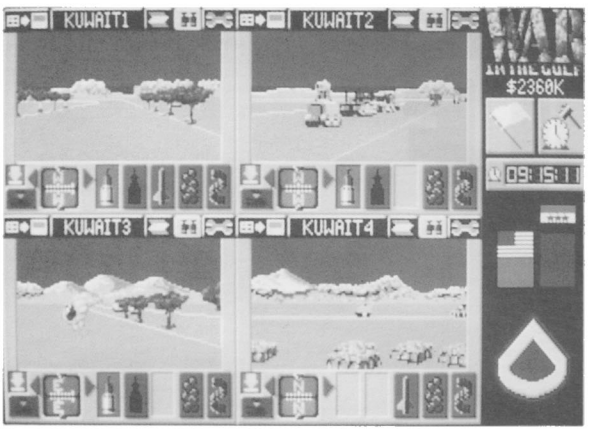


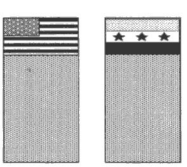
Figure 8.0
Quadrant Mode Screen

Just beneath the game logo you will see the current state of your bank balance, which is updated as soon as it changes during the game. Beneath this there is a white flag, or game **QUIT** icon, which allows you to exit the battle. You will be asked to confirm this decision before you are allowed to quit. To the right is the game **PAUSE** icon, which allows you to take a break during battle. Underneath, you will find the **TIME** display, which gives the time in hours, minutes and seconds on a 24 hour clock. You should keep an eye on this to note forthcoming artillery attacks or when your scenario involves a deadline. Beneath the clock there are two **STRENGTH** bars topped by Iraqi and American flags. These show the relative strengths of the two sides, calculated according to casualty and morale factors. At the bottom of this column you will see your **RANK** displayed graphically. Along the bottom of the screen there is a single text line which will display any vitally important information. You will be told about forthcoming artillery strikes, casualties in your team or hits on opposing cavalry.

Quit Game Icon

Pause Icon

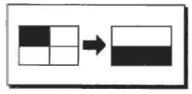
Time Display



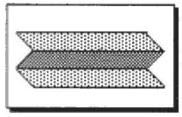
Strength Histograms

QUADRANT MODE

When you first enter the game you will be in quadrant mode, where the active part of the screen is split up into four sections relating to each of the four platoons of Team Kuwait. The upper row of icons in each quadrant allow you to alter what is viewed on the screen. The leftmost icon will **expand** the view of that particular platoon to occupy most of the screen - in this full screen

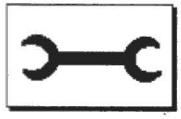


Expand View Icon



Map Icon

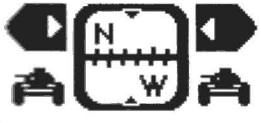
3-D View Icon



Status View Icon

Deadstop Icon

Zoom Icon



Rotate and Compass Icon

mode you will be offered extra features - but you will not be able to see all of the action. In the middle, the name of the platoon is displayed. To the right there are three icons. The **map** icon changes the view to a map quadrant with a plan view of the battlefield. The **3-D view** icon changes the view to a 3-d simulation of the battlefield. The **status** icon changes the view to a screen detailing the status of all vehicles in that unit. The icon corresponding to the current viewing mode is shaded in yellow. Chapter 2 details how to access these features by using the keyboard.

At the start of the game each quadrant displays a simulated 3-d view of the battlefield, see figure 8.0:

3D VIEW QUADRANT

When a three dimensional view of the battlefield is displayed, then at the bottom of the display you will see the following icons:

To the left there are two icons, one on top of the other. The red **dead stop** icon allows you to halt the movement of your unit. It is a toggle switch, and so when clicked again your unit will start to move at its previously determined speed. When you start the game you will always be stationary. You are only able to set your course and speed using the map views, rather than the 3d views.

The **zoom icon** will magnify the view on the screen by a factor of 6. This icon toggles between magnify and non-magnify.

To the right of these two icons are two red arrows which form a **rotate and compass icon**, allowing the player to rotate the view clockwise or anti-clockwise through 360°. This is equivalent to rotating the gun turret - IT DOES NOT ALLOW YOU TO ALTER THE DIRECTION IN WHICH YOU ARE TRAVELLING. Between the two rotate arrows lie two compasses: the upper (red) compass shows the direction which you (i.e. the gun turret) are facing; the lower (green) compass shows the direction in which the vehicle is facing. If you click on the central part of the compass, then your view will rotate towards the direction in which you are traveling.

Useful shortcut for players with a mouse: If the player depresses the RIGHT mouse button while the pointer is on the 3-d view, then the view will rotate at a rate relative to the distance of the pointer from the centre of the view. (The further the pointer from the centre, the faster the rotation.)

To the right of the compasses are five icons which represent the various types of weaponry available to the unit. Clicking on any of these is equivalent to a command to the loader to load a particular shell. When the shell is selected the icon clicks in (like a button) and when it is loaded the icon lights up. You will also hear a signal when the weapon is available for firing. The weapon

HEAT

SABOT

TOW

SMOKE

Machine Gun

Zoom Magnify Icon

Zoom De-Magnify Icon

loading times accurately reflect the time taken for a vehicle to rearm itself in battle. See Chapter 11 for more details. Once a weapon is fully loaded, the pointer becomes a set of sights when moved over the 3d display. Clicking at a particular point on the landscape leads to the shell being aimed at that point (with some predetermined inaccuracy factors). The five available weapon types, from left to right, are:

HEAT - a high explosive anti-tank round (see glossary);
SABOT - an armour-piercing tungsten shell (see glossary);
TOW - a high-range anti-tank missile (see glossary, and note in particular that this may only be fired when your vehicle is STATIONARY);
SMOKE - a smoke grenade which allows enemy vision to be obscured (see glossary);
MACHINE GUN - which is always available to the player and has an 'infinite' number of rounds (see glossary).

Most platoons will not have all weapon types available (for instance, the M1 Tank does not carry TOW missiles). If a weapon is not available then that particular icon will not be displayed.

Once the platoon has no more loaded shells of a particular type there will be a delay before it is possible to use them again, according to the re-load times of your weapons.

All of these screens operate in a multi-tasking mode. This means, for instance, that while you are waiting for one platoon to load its weaponry, you are free to do anything you wish with any other platoon.

MAP QUADRANT

The map quadrant screen shown in figure 8.1, allows you to alter the movement and formation of any platoon. The whole of the map may be viewed at once, or you may zoom into any portion of the battlefield using the icons to the right of the map. All of the major terrain features of the battlefield are displayed on the map - roads are light grey, rivers are blue, forests and dunes are green/ brown shaded clumps, and buildings are marked as red and white boxes.

There are two zoom icons represented by magnifying glasses. Clicking on the upper zoom icon **magnifies** the resolution of the map. Clicking on the lower zoom icon **demagnifies** the map. There are seven levels of magnification. On the lowest level the whole width of the battlefield - 4 miles across- is displayed. On the highest magnification the width of the displayed map is 0.2 miles across.

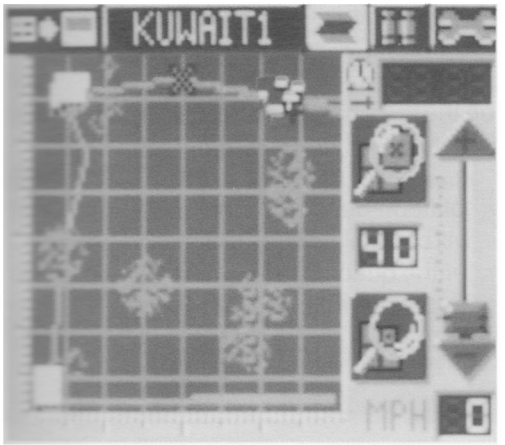


Figure 8.1
Map Quadrant

The full **width** of the map in miles is shown between the two zoom icons.

If you have a mouse, and you are not viewing the whole battlefield, you may scroll the map in any direction by locating the pointer over the map and depressing the right mouse button. The map will then scroll at a speed and direction relative to the position of the cursor from the centre of the map.

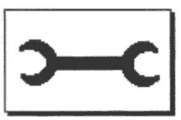
In order to move your platoon you have to provide information about the desired destination and the speed. Place the pointer over the map at the required destination and press fire. A crosshair will be left on the screen to mark the current destination point. Now go to the **slider bar** and set the intended speed of travel. You may do this either by clicking on the arrows at the top or bottom of the slider bar, to increase or decrease the platoon speed respectively, or by moving the pointer to the desired speed. The current speed is displayed, in miles per hour, under the bottom arrow of the slider bar.

Map Width Display

The expected time of arrival, or **ETA**, at the current destination is printed at the top of the right hand side of the map quadrant. Note that only one destination is allowed for any platoon at any time, and that this destination may be altered at any time, whether or not the previous destination has been reached. The maximum speed of any of your vehicles is 50 miles per hour. The maximum speed you may achieve depends on the terrain type across which you are traveling. If you wish to travel by the fastest possible means, try to find a suitable road.

Slider Bar

ETA Icon



Status View Icon

STATUS QUADRANT

The Status Quadrant is accessed by clicking on the status icon. Every vehicle in the unit will then be displayed on the screen. (By now you will, hopefully, be able to recognise and identify the profile of all of your vehicles!) To the right of each vehicle are two bars. The upper bar represents the morale of the personnel in the vehicle. Morale is improved when the vehicle achieves a hit on an Iraqi tank, and decreases when the platoon is fired at, or there are losses on the American side. The lower bar represents the efficiency of the vehicle and its personnel. The efficiency decreases when the vehicle has suffered some damage from opposition fire power. The values of morale and efficiency affect

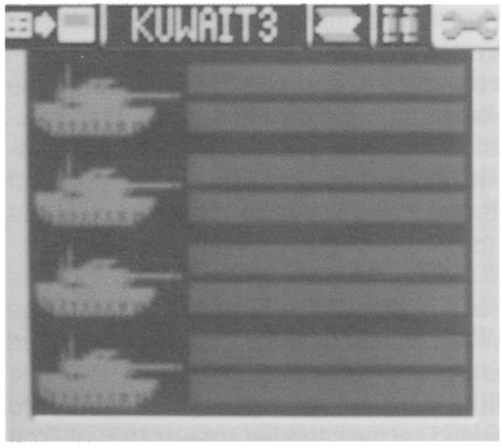
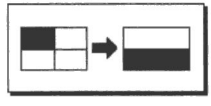


Figure 8.2
Status Quadrant

the ability of your platoon to strike the opposition accurately and swiftly when a command to launch a weapon is raised. If a vehicle is terminally damaged it will turn red on the status screen. That vehicle and any remaining personnel will be left behind when the platoon moves on. If all of the vehicles in a platoon are disabled, that platoon becomes ineffective, and a red status screen will be displayed. See figure 8.2. You are also able to alter the quadrant view of a disabled unit to display the map of the battlefield.

FULL SCREEN MODE

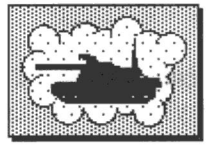


Expand View Icon

You may expand the view to one single unit by clicking on the top left icon of any of the quadrants. This will take you into full screen mode for that platoon. See figure 8.3. The top row of icons in this mode are identical in function to those in quadrant mode. The only difference you will note is that all of the units are named, with the current platoon in view highlighted in yellow. If you click on another unit name then the screen will change to a full screen view for that unit

FULL SCREEN 3D VIEW

This type of view is identical to the quadrant 3-d view, except that it occupies the full screen(!) and there are additional facilities available. The control panel underneath the view has the following icons:



Engine Smoke Icon

Engine smoke icon. Clicking on this icon causes your platoon to produce engine smoke. This will prove very useful in confusing your enemy if you find yourself in a tight corner. **If you find that you are always getting badly damaged by the enemy, try to use engine smoke more frequently.**

Infra-Red Imaging Icon

Infra red (or thermal) imaging icon. This system is vital to see what is happening when it is dark, or when enemy forces are covered by smoke. Anything which produces heat can be imaged using a thermal sight - you will soon get used to identifying vehicles by their thermal image. This feature is very useful for identifying vehicles camouflaged on the edge of forests and dunes. The thermal image generated in a modern tank is green and not red.

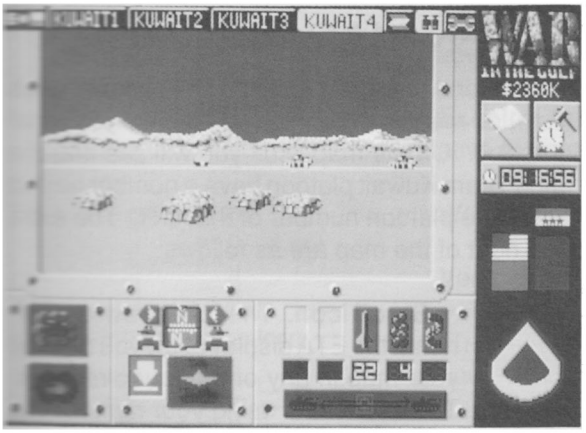
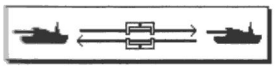


Figure 8.3
Full Screen Mode

Rotation and Compass Display

Zoom Icon



Laser Range Finder

Rotation icon and compass display. These work in the same way as in the quadrant view, and the mouse shortcut still applies.

Dead stop icon. This allows you to come very quickly to a dead stop. You will find this feature very useful if you suddenly find a target, and you need more accuracy or you need the use of TOW missiles.

Zoom icon. When this icon is accessed, the central portion of the screen is magnified by a factor of 6. You will find the zoom facility essential for spotting vehicles which are over 500m away. Since the range of some of your (and the enemy's) weapons is over 2 km, using the zoom feature may save Team Kuwait from destruction. Note that if you rotate your view when you are in zoom mode, the speed of rotation is slower than in normal viewing mode.

Weapon icons. These icons work in identical fashion to the quadrant weapon icons. The only difference is that the number of remaining missiles for each type is displayed underneath each icon. If you have more than one hundred missiles of a particular type in your unit, the number displayed will be ninety nine.

Laser range finder icon. Underneath the weapon displays you will find the laser range finder, which lights up red when in use. The range finder will lock on to a reflective target (such as an armoured vehicle) if the firing cursor is placed directly over the object. You will know that the system has locked on when the cursor changes shape to a rectangle. The range finder, however, will not keep a moving object permanently locked - so it is easiest to use on a stationary target when you are stationary. Remember, though, that when you are stationary you present an easier target for your opponent. Although use of the range finder will increase your shooting accuracy, it does not provide a 100% hit rate. Clicking on this icon will toggle range finding on and off.

FULL SCREEN MAP VIEW

The full screen map for a particular unit has all the capabilities of the quadrant map, as mentioned earlier, with some additional features. See figure 8.4. On the map itself you will see that the flags relating to each Team Kuwait platoon have a number next to them - these relate to the platoon number of that unit. The extra icon features to the right of the map are as follows:

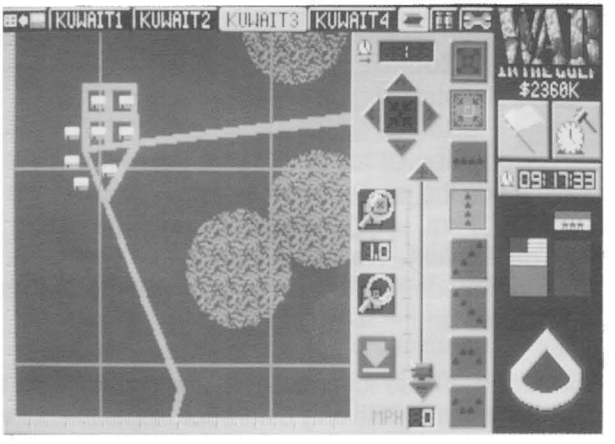
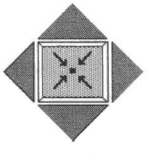


Figure 8.4
Full Screen Map View

Scroll icon. The four arrows underneath the ETA display allow you to scroll your map in any of the four directions. The shortcut of using your right mouse button to scroll still applies. If you click on the region in the centre of the arrows the map will automatically centre on your platoon position, and if you are moving the map will scroll to keep your unit at the centre of the display.

Dead Stop icon. This red icon, just to the bottom left of the speed slider bar, causes your platoon to come to a dead halt when clicked.



Scroll Icon

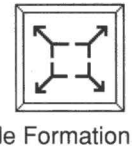
Wide formation icon. This increases the spacing between vehicles in your platoon to 100 metres. You might wish to increase your formation spacing if you are travelling in file through a narrow gap between forests. If you are spotted while you go through the gap, then you will have more time to react

Narrow formation icon. This reduces the inter-vehicle spacing in your platoon to 50 metres.

Dead Stop Icon

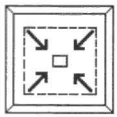
The bottom six icons of the vertical column to the left of the screen allow you to change the formation type of the vehicles in your platoon:

In-line places your vehicles in a line abreast relative to your direction.



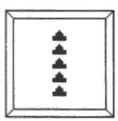
Wide Formation Icon

Column places your vehicles in a line ahead relative to your direction.

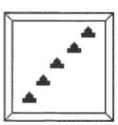


Narrow Formation Icon

In-line Formation Icon

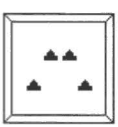


Column Formation Icon

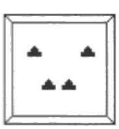


Echelon Right Icon

Echelon Left Icon



Wedge Formation Icon



Vee Formation Icon

Echelon right places your vehicles on a left to right diagonal relative to your direction.

Echelon left places your vehicles on a right to left diagonal relative to your direction.

Wedge places your vehicles in a wedge formation.

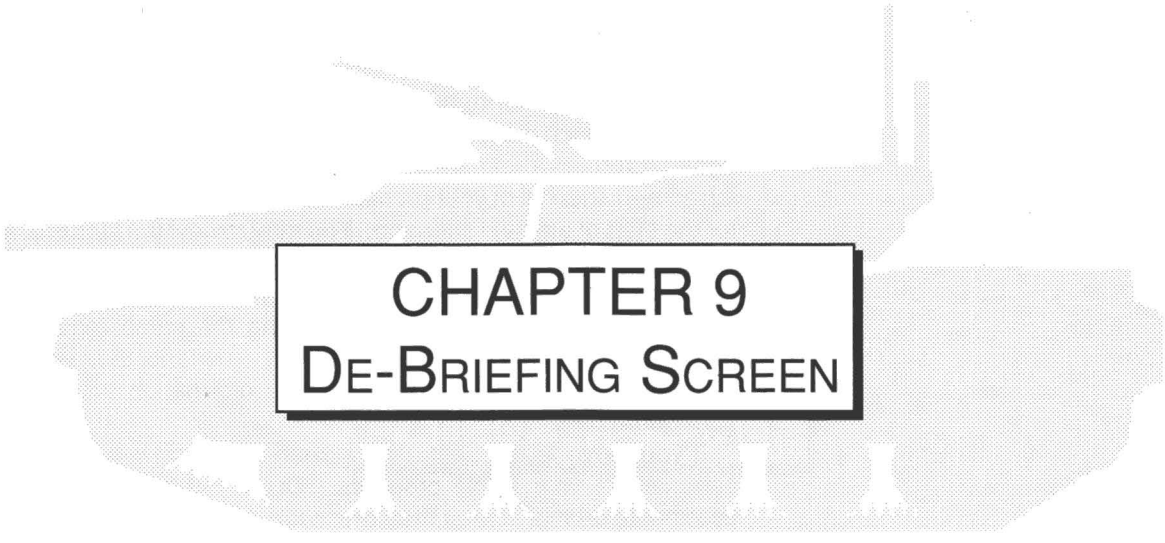
Vee places your vehicles in a vee formation.

The choice of different formation types will alter your exposure to enemy fire according to your relative locations.

FULL SCREEN STATUS VIEW

As in the quadrant status view, the morale and efficiency of each vehicle in a platoon is displayed. The extra information provided in full screen view is the number of available weapons for each vehicle in your platoon. All vehicles in Team Kuwait are armed with an 'infinite' number of machine gun rounds. Particular damage to any vehicle is displayed in red.

WAR IN THE GULF



CHAPTER 9
DE-BRIEFING SCREEN

9 - DE-BRIEFING SCREEN

A battle may end for a number of reasons. You may have won because you have reached a desired location, held a defensive position for enough time, or destroyed the majority of the opposing Iraqi forces. You may have lost because you have not gained a desired attacking position, held a defensive position for long enough, or lost too many of the vehicles of Team Kuwait. In general, if you do not achieve your objectives within forty playing minutes, then you will lose the battle. If you fulfil all of the mission objectives mentioned during briefing then you should be victorious, if not then you will certainly have been defeated.

When the end of the scenario has been reached you will be told the outcome in the text line at the bottom of the gameplay screen. You then have the option to click on this line in order to view the de-briefing screen, or to quit the game using the white flag icon. The reason we have provided this option is for the case when you have WON a scenario, but have lost so many vehicles or been debited so much money that you would rather re-try the scenario again. If you win a scenario and then select to go onto the de-briefing screen, then all of your gameplay information is written to disk for the start of the next scenario. You may review the status of all of your platoons before deciding whether or not to go to de-briefing and hence increment your game file. In this case you will not be allowed to repeat the battle again using the same registered player file. Note that if you have LOST the scenario, then you will have to replay the scenario again and no information is written to your game disk.

If you move to the debriefing screen, then you will receive a summary of your battle progress. Once you have noted the comments on this screen then press fire to return to the start-up filing screen. The game can then be continued as before.

WAR IN THE GULF

CHAPTER 10
How To Play War in the Gulf

10 - HOW TO PLAY WAR IN THE GULF

STRATEGY

Before launching yourself into a scenario it is best to use the briefing information to decide on your strategy for the forthcoming battle. Quite often you will be expected to position your vehicles or take some action very quickly at the start of the scenario (particularly if it is a defensive scenario). Through practise you will learn the strike power of Team Kuwait, as well as the enemy. This will allow you to make more appropriate decisions about which vehicles to purchase at the start of each scenario. The information in Chapter 11 referring to vehicle types and the additional information in the Glossary will give you an idea of the relative strengths and ranges of all of the weapons that you will use or come up against. For instance, a BTR has very little armour and is only armed with a machine gun. If you are in a platoon manned with M1 tanks, you therefore have very little to worry about from a BTR, and you should dispose of it at your leisure, while realising that the threat from a T72 is rather more potent. The TOW missiles on your M-2's and ITV's are your most potent weapons in terms of strength and range, but remember that your vehicle must be stationary before they can be fired. Because you have to control four tank platoons simultaneously in War in the Gulf, we have not been strictly accurate in our operation of these wire guided missiles. Instead of leaving you to control and aim the missile over its flight of up to 15 seconds (thus causing you to relinquish your control of everything else that is going on), we have treated the TOW as a normal missile - once launched it will strike the area you have aimed at. The loading times for all of the missiles are accurately presented and reflect the length of time it takes for a missile to be loaded after the tank commander (you!) has ordered his gunner and loader to set up a target. It is part of the frustration of war that it takes some time to load an appropriate missile when confronted by a new and threatening target.

Because of the importance of communications facilities to the Iraqis, these will play a crucial role in your mission. The following section, Communications facilities, provides detailed information regarding this aspect of the mission.

It is worth remembering that tank battles are often fought at long range, and in particular that a platoon of tanks in the middle of a sandy plain are 'cannon-fodder' for suitably placed opposition. The perimeter of forests and sand dunes provides very adequate protection for tanks, because of the camouflage they provide. In War in the Gulf, you will find that sand dunes or forests on your

battle map extend about 75 metres further than they do on the three dimensional display. This denotes the area where you can place yourself in order to look out on the battlefield while still camouflaged from your enemy. It is therefore often a good policy to always look for an appropriate area of sand dune or forest perimeter when considering your manoeuvres. As soon as you fire, however, you will give your opponents a chance to locate you for about ten or fifteen seconds, if they happen to catch a glimpse of smoke from your gun barrel. Remember that the opposition can use the same tactic of utilising cover. Your infra-red sights will often be invaluable to spot vehicles which would otherwise be hidden in the tree line.

The magnify mode on the 3d view is very powerful. Since you should be able to destroy a vehicle which is well over a mile away from you, you will often need to use the magnified sights in order to locate the enemy before they spot you. When you are being attacked try to locate the precise vehicles which are firing at you, since they will be the most potent threat. It is obviously more urgent to dispose of a threat which is attacking you rather than one which is performing some other action!

The position of known Iraqi units will often be marked on the map displays with a flag representing each unit. These flags will be displayed either when the player should have the units in his sights or when there has been information received from intelligence. However, just because an Iraqi flag does not appear on the map does not necessarily mean that there are no Iraqi units nearby. For instance, if an opposing unit is in an area where a spotter unit would be unlikely to be able to track them, there will normally be no information presented on the map screens. It is up to you to seek and destroy the enemy.

It is inevitable that some of your battles will be due to take place at night. It is dark between the hours of 11 p.m. and 4 a.m. Between these times you will find that all of your normal external views are completely dark. If you do not wish to join battle in the dark, then you have the option to increment the time on the vehicle purchase screen. But remember that time is of the essence during this campaign, and you will lose valuable hours. If you are going to fight at night then you must use your infra-red sights at all times. At first this will seem quite disconcerting, but you will have to learn to cope!

COMMUNICATIONS FACILITIES

As you will already have gathered, one of your constant objectives during War in the Gulf is to locate and destroy as many communication facilities as possible. The Iraqis have taken over

and supplemented the communication facilities throughout Northern Kuwait. It is vitally important that the Iraqis are not able to get early warning of the disposition and performance of you forces. In each region, the longer it takes you to achieve success, and the longer it takes you to destroy communication centres, the harder you will be attacked by Iraqi forces. Keep this in mind when you decide to do repairs, or give your tank crews some time off. It is a fine balancing act.

Sometimes you will find that intelligence has pinpointed certain facilities with great accuracy, and you will be told this during your mission briefing. However, there may be some communication stations which have escaped their eyes, and so you will have to search for these during your offensives. Your battle maps do not show the location of most comms centres, so you will not have any extra information from this source.

SCOUT UNITS

In many battle areas there are also isolated 'scout' vehicles, which the Iraqis use to help locate and assess your movements. These are modified BTR personnel carriers which can travel at fairly high speed. They will appear on your battle maps in the same manner as any other opposition vehicle. Although they cannot cause any physical damage to your Team, it will be vital to locate any 'scouts' within your area so that information is not passed on to other enemy units.

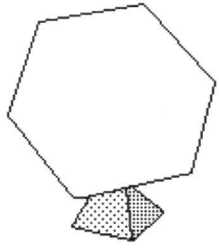
ARCHITECTURE OF THE REGIONS

There are many different types of buildings and objects which you will come across throughout Northern Kuwait. They range from road signs and houses, to factories and satellite dishes. Every object which you can see can be destroyed. The amount of explosive force required depends very much on the type of structure you are attacking. A statue or palm tree will collapse if directly hit by a HEAT missile. A factory, on the other hand, might require many direct hits from TOW missiles to be completely destroyed. It is important that you try to aim at the centre of any object if you are going to destroy it efficiently and without wasting valuable and expensive ammunition.

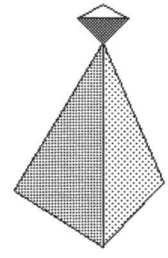
Every object which you destroy will have an effect on your financial balance sheet. Buildings which are clearly Kuwaiti property and not a direct part of the Iraqi war effort should be left intact. After all, the billions of dollars of damage done to property in the last Gulf War is still foremost in the minds of the Kuwaitis. Any unnecessary building which is destroyed, even by the Iraqis, will result in a fine being imposed, and an immediate reduction to

your financial account. It is therefore to your advantage to subdue the Iraqis as quickly and efficiently as you can. The scale of these charges will become apparent to you as they happen, and you will learn how to proceed by experience. On the positive side, the destruction of any buildings which are useful to the Iraqi war effort will be handsomely rewarded. Virtually all communications or production facilities fall into this category. Sometimes, if the level of destruction is too great, then your battle will be forcibly terminated. You will learn that in the middle 1990's excessive collateral damage is no longer politically acceptable!

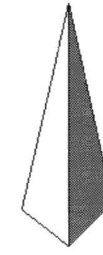
The major types of objects you will encounter are as follows;



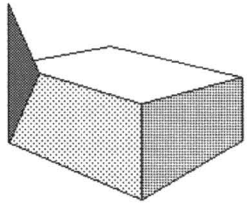
Satellite Dish



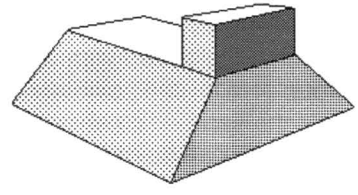
Radar Tower



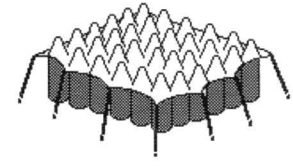
Communications Aerial



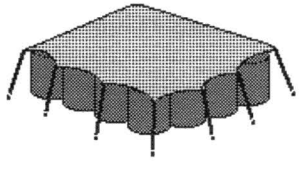
House with
Communications Aerial



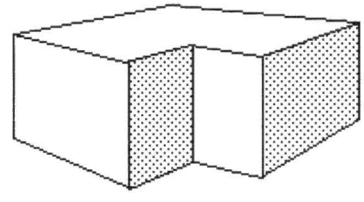
Factory



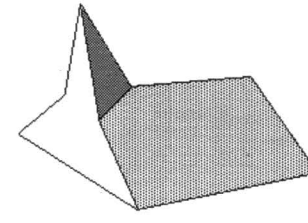
Ammunition Dump



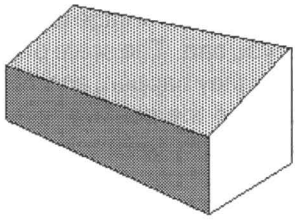
Fuel Dump



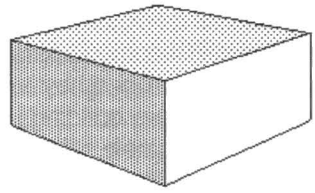
Hospital



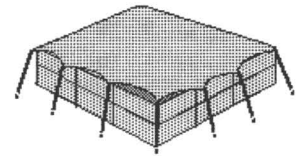
Mosque



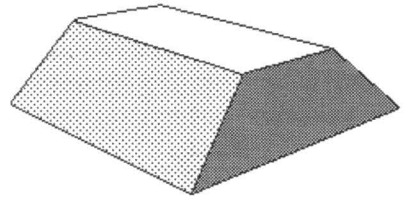
House



House



Food Dump

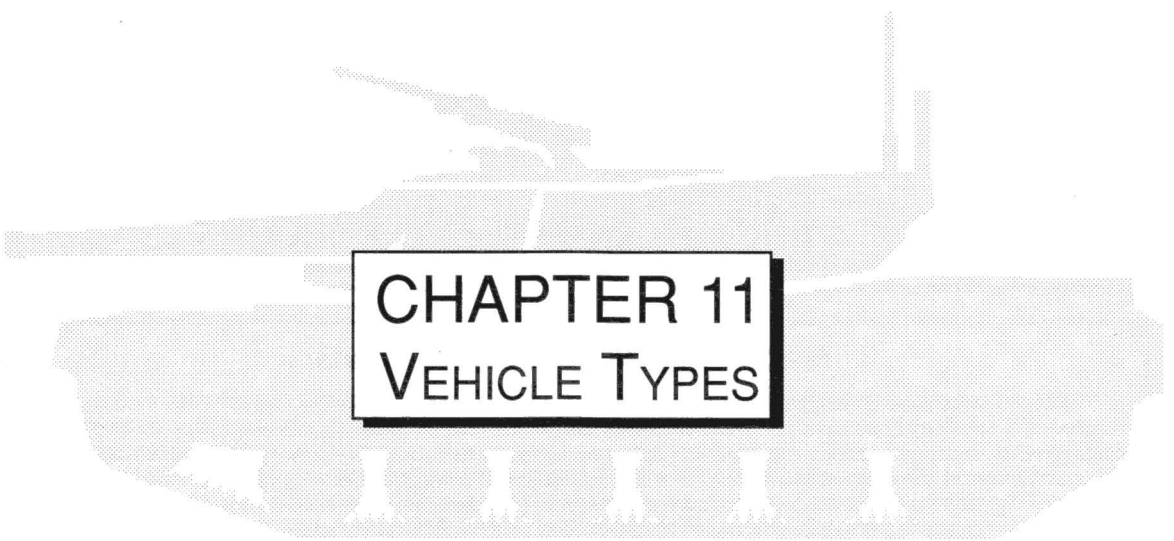


Warehouse

TERRAIN

The topography of each battle area will profoundly affect the way in which you approach each battle. Obviously you need to determine those places where you might get cover and, alternatively, where the enemy might gain some cover. If you need to perform tasks swiftly, or need to take fast action, you also need to evaluate the speed with which you can move cross country. A group of M1's can achieve nearly twice the speed on a road than over the sand. You should investigate the various speeds with which you can traverse different types of terrain, and build these factors in when determining the optimum routes to take. One extra feature which War in the Gulf has are craters which can appear if there is missile damage on roads. They can cause a significant decrease in your speed over small distances. You are able to create craters yourself, and these will slow down Iraqi vehicles just as effectively as your own. If you remember this, then it might prove very useful to you in the later stages of your Gulf campaign!

WAR IN THE GULF



CHAPTER 11
VEHICLE TYPES

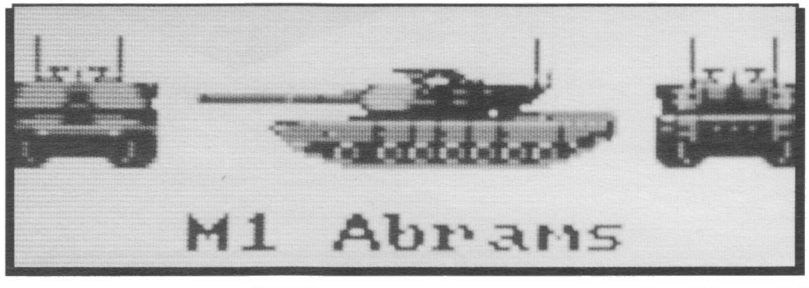
11 - VEHICLE TYPES - Team Kuwait

M-1 Abrams Main Battle Tank

The M-1 Abrams is the fastest and best protected main battle tank in service with any army in the world today. Its 105 mm gun is extremely effective and, while it does not have the muzzle velocity of the 125 mm hypervelocity smoothbores of Soviet tanks, its advanced ammunition and very effective ballistic computer combine to give comparable or superior performance. New SABOT ammunition (see glossary) has recently increased this effectiveness. The thermal sights, allowing the gunner improved visibility through smoke and darkness, give the vehicle a unique combat advantage over its adversaries. The M-1 uses 'Chobham' composite armor, which contains a large outer layer of hard steel, with successive inner layers of other metals and ceramics. This type of armor very effectively absorbs the heat from the hot gasses of HEAT ammunition. During the Gulf War 90-91, of the1956 M1A1 Abrams that engaged Iraqi forces, only 4 were disabled and another 4 slightly damaged. One took a direct hit from a T-72, but was still able to fight. Great emphasis has been placed on reliability and maintenance, and it is claimed that the complete engine can be removed for replacement in under 30 minutes.

Specifications

Crew	4
Weight (Tonnes)	54.5
Full Length (cm)	977
Engine Type	Turbine
Road Range (Km)	498
Max Speed (Km/h)	72.4
Max Speed off-road	48.3
Frontal Armour (mm)	380
Main Gun	Smooth
Calibre (mm)	105
Effective Range (m)	2500
Maxrate (round/min)	8
Total Rounds	55
HEAT Rounds	Yes
SABOT Rounds	Yes
TOW Rounds	No



M-113 Armoured Personnel Carrier

The M-113 is the basic armored troop carrier in the U.S. Army, and has been since the Vietnam War. It was designed 'to provide a lightweight, armored personnel carrier for armor and infantry units capable of amphibious and air-drop operations, superior cross-country mobility and adaptations to multiple functions'. The all-welded aluminium hull protects the crew from small arms fire and shell splinters. It is fully amphibious, being propelled in water by its tracks. Successful adaptations include the M163 Vulcan self-propelled anti-aircraft gun, the M577 Command Post and the M901 Improved TOW Vehicle. The M-113 is being replaced by the M-2 Bradley Infantry Fighting Vehicle, but the slow procurement rate means that many US mechanised units will continue to use the M-113 into the 1990's.

Specifications

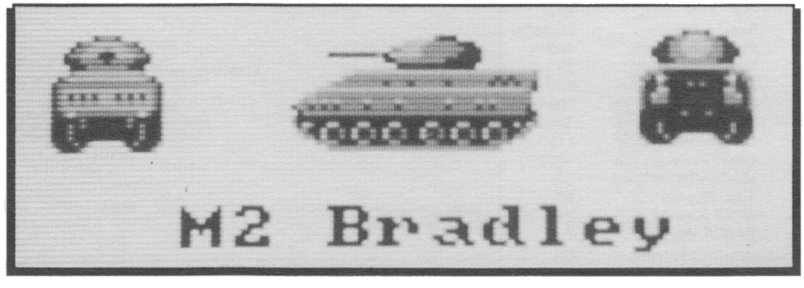
Crew (+ squad)	2 (+11)
Weight (Tonnes)	11.2
Full Length (cm)	486
Engine Type	Diesel
Road Range (Km)	321
Max Speed (Km/h)	64.4
Max Speed in water	5.8
Frontal Armour (mm)	38
Main Gun	Machine
Calibre (mm)	12.7
Effective Range (m)	500
Maxrate (round/min)	N/A
Total Rounds	1200
HEAT Rounds	No
SABOT Rounds	No
TOW Rounds	No

M-2 Bradley Infantry Fighting Vehicle

The Bradley is a reasonably protected infantry carrier and is extremely mobile and well armed. The hull of the M-2 is of welded aluminium armor with additional laminate fitted to the hull front, sides and rear. It is fully amphibious, being propelled through water by its tracks. By 1987 only 3000 Bradleys had been delivered to the US Army out of a procurement of nearly 7000 vehicles. The M-2 has come under considerable fire from critics due to its expense and slow delivery. Critics also suggest that its inferior armor protection will hamper its ability to operate with the M1 tank. An effort is being made to equip battalion scout platoons with Bradleys, however. The M-2 has extra firing ports to side and rear and can carry a full rifle squad. It is worth noting that the M-2's TOW missiles may only be launched when the vehicle is stationary.

Specifications

Crew (+squad)	3 (+6)
Weight (Tonnes)	22.7
Full Length (cm)	645
Engine Type	Diesel
Road Range (Km)	483
Max Speed (Km/h)	66
Max Speed in water	7.2
Frontal Armour (mm)	60
Main Gun	Cannon
Calibre (mm)	25
Effective Range (m)	1000
Maxrate (round/min)	100
Total Rounds	900
HEAT Rounds	No
SABOT Rounds	No
TOW Rounds	2+5

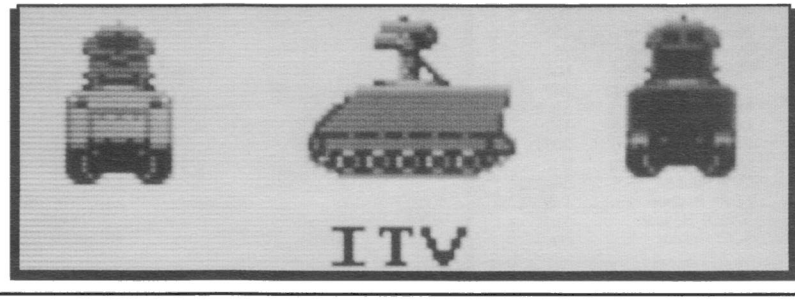


M-901 Improved Tow Vehicle (ITV)

This is a variant of the M-113, mounting the 'hammerhead' armored TOW launcher in an overhead mount. The launcher assembly contains twin TOW launch tubes, with another 10 launch missiles carried in the hull. This gives the ITV the ability to park with the entire vehicle behind cover and only the missile launcher exposed. The launcher can also be reloaded from inside the vehicle. A major disadvantage is that the armored TOW launcher and ammunition carried internally have badly overloaded the chassis and reduced its mobility significantly. Also, remember that a TOW missile can only be launched from a stationary vehicle. The ITV is the standard anti-tank missile carrier of the U.S. Army, having first entered service in 1979.

Specifications

Crew	4
Weight (Tonnes)	11.2
Full Length (cm)	486
Engine Type	Diesel
Road Range (Km)	321
Max Speed (Km/h)	55
Max Speed off road	N/A
Frontal Armour (mm)	38
Main Gun	None
Calibre (mm)	-
Maxrate (round/min)	-
Total Rounds	-
HEAT Rounds	No
SABOT Rounds	No
TOW Rounds	2+10
Effective Range TOW	4000m



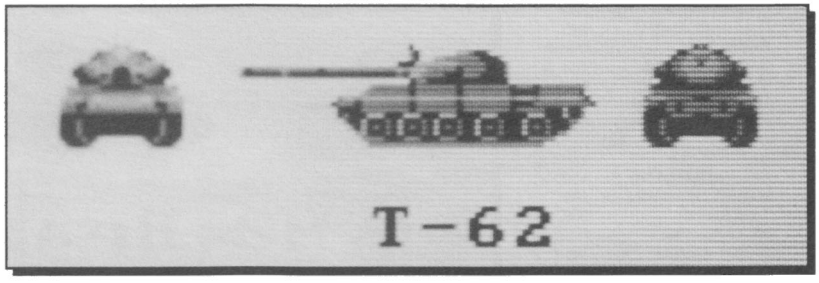
VEHICLE TYPES - Iraq

T-62 Main Battle Tank

First fielded in the 1960's, the T-62 was the first major tank to use a smoothbore gun. There were severe limitations due to engineering design, which for example, meant that reloading could only occur at a set turret angle and barrel elevation. The T-62 has now been superseded in front line service by more modern types, such as the T-72. The T-62 has been used in combat by the Egyptian and Syrian forces, as well as Iraq during the Gulf War. Although not so sophisticated as western tanks, the T-62 has proved itself a rugged and reliable vehicle. It is estimated that at least 40,000 T-62 tanks have been built by the Soviet Union, and it is also in service with Afghanistan, Algeria, Cuba, India, Israel, Libya and North Korea.

Specifications

Crew	4
Weight (Tonnes)	37.5
Full Length (cm)	933
Engine Type	Diesel
Road Range (Km)	450
Max Speed (Km/h)	50
Max Speed off-road	N/A
Frontal Armour (mm)	200
Main Gun	Smooth
Calibre (mm)	115
Effective Range (m)	1500
Maxrate (round/min)	3-5
Total Rounds	40
HEAT Rounds	Yes
SABOT Rounds	Yes
Anti-tank Rounds	No

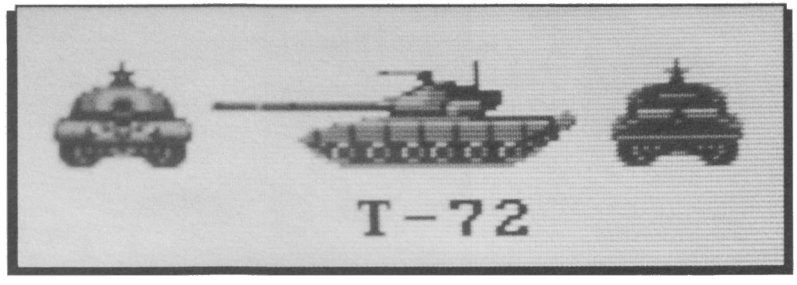


T-72 Main Battle Tank

The T-72 is one of several modern tanks that equip the Red Army, and was its main battle tank throughout the 1970's. It is a logical, progressive development of the T-62, incorporating a larger gun, improved fire control system, better protection and a more powerful power plant. The strange drums on the back of the T-72 are long range fuel tanks. The fire control system is believed to include a laser range-finder. Standard equipment includes an NBC system, a full range of night vision equipment, a snorkel for deep wading and a dozer blade which is mounted to the hull. In the late 1980's a new model was spotted, which had a bulging turret front, known colloquially as the 'Super Dolly Parton'.

Specifications

Crew	3
Weight (Tonnes)	41
Full Length (cm)	953
Engine Type	Diesel
Road Range (Km)	450
Max Speed (Km/h)	70
Max Speed off road	N/A
Frontal Armour (mm)	250
Main Gun	Smooth
Calibre (mm)	125
Effective Range (m)	2000
Maxrate (round/min)	6-8
Total Rounds	39
HEAT Rounds	Yes
SABOT Rounds	Yes
TOW Rounds	No



BMP-2 Infantry Fighting Vehicle

BMP is an abbreviation for Bronevaya Maschina Piekhota, or "Armored Vehicle, Infantry". The BMP-1 was the first infantry fighting vehicle in the world to mount a cannon and antitank missile armament, thus giving the rifle squad the ability to engage enemy armor at substantial ranges with a reasonable prospect of success. The newly-introduced BMP-2 is an improved version with a larger turret which mounts a 30 mm autocannon, and an AT-5 'Spandrel' anti-tank missile.

Specifications

Crew (+squad)	3 (+6)
Weight (Tonnes)	14.5
Full Length (cm)	674
Engine Type	Diesel
Road Range (Km)	500
Max Speed (Km/h)	70
Max Speed off road	N/A
Frontal Armour (mm)	19
Main Gun	Auto Cannon
Calibre (mm)	30
Effective Range (m)	1000
Maxrate (round/min)	N/A
Total Rounds	40
HEAT Rounds	No
SABOT Rounds	No
Anti-Tank Rounds	Yes
Anti-Tank Range (m)	4000

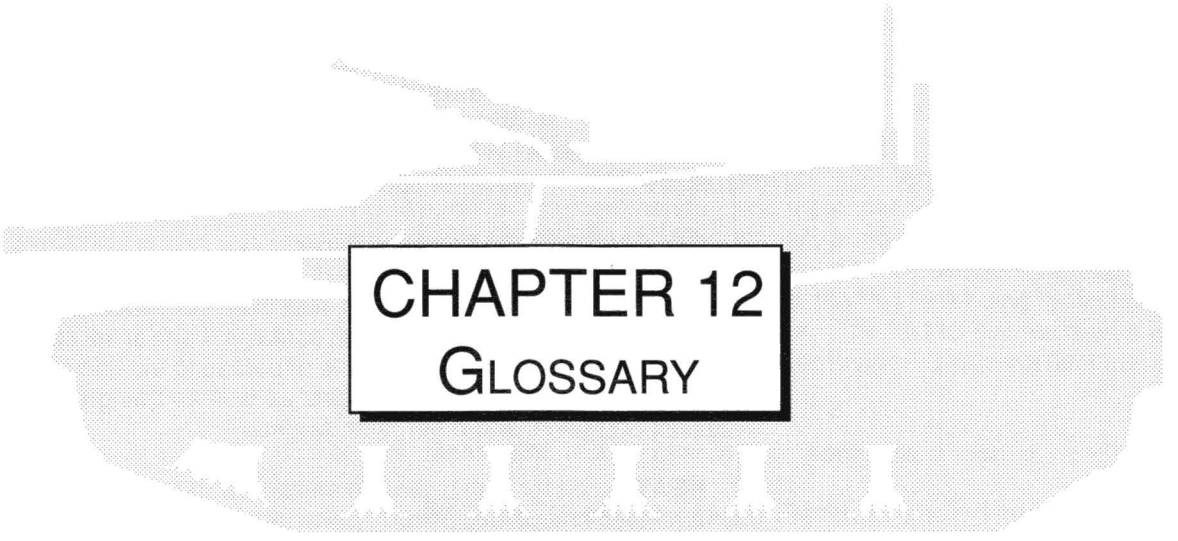
BTR-60 Armoured Personnel Carrier

The BTR-60 is a wheeled armored personnel carrier which equips many Soviet motorised rifle units. The advantage of a wheeled vehicle is a higher road speed, lower manufacturing costs, and generally increased ease of maintenance and mechanical reliability. The main disadvantage is that a wheeled vehicle loses more of its road speed when travelling cross country - however, it is sufficiently fast on the road that it can keep up with most tracked vehicles cross country.

Specifications

Crew (+squad)	2 (+12)
Weight (Tonnes)	10.2
Full Length (cm)	722
Engine Type	Petrol
Road Range (Km)	500
Max Speed (Km/h)	80
Max Speed off road	N/A
Frontal Armour (mm)	9
Main Gun	Machine
Calibre (mm)	14.5
Maxrate (round/min)	N/A
Total Rounds	500
HEAT rounds	No
SABOT rounds	No
TOW rounds	No

WAR IN THE GULF



CHAPTER 12
GLOSSARY

12 - GLOSSARY

BMP-2: A Soviet fully tracked infantry-fighting vehicle mounting a 30 mm cannon, an antitank guided missile, and a 7.62 mm machine gun. The BMP carries a crew of three and a six-man infantry squad. The BMP provided the prime motivation for the design and production of the Bradley fighting vehicle.

Bradley: An armoured fighting vehicle that comes in two versions, the M-2 mechanized infantry fighting vehicle version and the M-3 scout version. Both have a two-man turret that mounts a TOW missile launcher, a 25 mm chain gun and a 7.62 mm machine gun mounted coaxially.

BTR-60: A Soviet eight-wheeled armoured personnel carrier. This vehicle comes in several versions, from the original, which has an open top, to the BTR-60PB, which is completely enclosed and carries a small turret mounting a 14.5 mm and 7.62 mm machine gun. In addition to the personnel carrier version, the BTR-60 serves as a command and control vehicle, close air support vehicle, and other such uses.

CO: Short for Commanding Officer.

DPICM: Short for dual-purpose, improved conventional munitions. This is an artillery round that contains many small submunitions or bomblets that are capable of defeating the thin armour located on top of armoured vehicles as well as being effective against personnel and other "soft" targets.

HEAT: Short for high explosive antitank, a round that depends on a shaped charge explosion to penetrate an armoured vehicle's armour. Because the round contains high explosive, it has a secondary role as an antimaterial round. A typical muzzle velocity might be 1100 metres per second, with a penetration of over 150 mm in reactive armour. It is, however, much more effective against APC's than tanks, for which SABOT or TOW ammunition is more appropriate.

ITV: Short for Improved TOW vehicle. A modified M-113 armoured personnel carrier that has an antitank guided missile launcher mounted on a small rotating turret. TOW stands for tube launched, optically-tracked, wire-guided antitank guided missile. The TOW is currently the heaviest antitank guided missile in the U.S. Army's inventory capable of hitting a tank-sized target out to a range of 3700 metres.

Machine Gun: Every tank and personnel carrier in War in the Gulf carries an M2 calibre 0.50 machine gun, nicknamed 'Ma Duce'. This is the same heavy machine gun used in World War 2 - and serves as a tank commander's weapon. Additionally, each tank is provided with two 'M240' 7.62 mm machine guns. Of Belgian design, one is mounted coaxially next to the main gun - hence the nickname 'Coax'. The second M240 is mounted free-swinging outside the loader's hatch - its main value being that the two machine guns are interchangeable, as well as giving the loader something to hang on to when the tank is moving!

M-1: This is currently the main battle tank of the U.S. Army. It has a crew of four, mounts a 105 mm main gun, an M2 calibre 0.50 machine gun, and an M240 7.62 mm machine gun. The 54-ton tank is powered by a 1500 horsepower turbine engine and is capable of 45mph. The fire-control system incorporates a laser range finder, a solid state computer, a thermal imaging sight, and other electronics that allow the main gun to fire while on the move with a high degree of accuracy, day or night.

M-113: Until recently, the M-113 was the primary U.S. Army armoured personnel carrier. Weighing 11 tons, it has a crew of two, driver and commander, and the capacity to carry an entire infantry squad. The M-113 is normally armed with a calibre .50 M2 machine gun located at the commander's position. Because infantry cannot fight while mounted, the M-113 is being replaced by the M-2 Bradley fighting vehicle. The M-113 still remains a mainstay in the U.S. Army, performing support roles on or near the front.

Mech: Short for mechanized or mechanized infantry.

SABOT: The word is actually French for shoe. Here, it is the name of an antitank round. SABOT is short for armour-piercing fin-stabilized discarding sabot (APFSDS). The round consists of a small tungsten alloy or depleted uranium penetrator that has a diameter smaller than the diameter of the gun tube. To compensate for this , the penetrator is seated in a boot that is the same diameter as the gun. This boot, called the SABOT, falls away after the round leaves the gun, leaving the penetrator to continue to the target. The SABOT round has a very effective armour penetration out to 2500 metres. More useful against tank armour than a HEAT round.

Smoke: Smoke is very usefully generated in battle in order to obscure the location of vehicles from the enemy. There are three ways in which smoke can be produced in the battlefield. M-1 tanks

and M2 Bradleys have smoke grenade launchers on the sides of the turret. These can be fired forwards, giving a short-lived smoke-screen. The same vehicles can also produce engine exhaust smoke, which produces a smoke screen from the vehicle's rear, and which will move with the vehicle if it is in motion. Artillery smoke is very useful when called in just before an attack on an enemy position, to obscure you from their view.

T-62 Tank: A Soviet tank with a four-man crew and mounting a 115 mm smooth bore gun, a 12.5 mm and a 7.62 mm machine gun. Though considered obsolete, it is still very capable and found in many Warsaw Pact units.

T-72 Tank: A Soviet tank with a three-man crew and mounting a 125 mm smooth bore gun, a 12.5 mm and a 7.62 mm machine gun. The elimination of the fourth crewman is achieved by using an automatic loader for the main gun. Special armour and a sophisticated fire-control system make it a powerful foe that is difficult to stop.

Team: A company-sized unit that includes both tank and mechanized infantry platoons. Unlike a peacetime company, the number and type of platoons in a team can vary according to its assigned mission. In the case of Team Kuwait, the default Team initially has two tank and one mechanized infantry platoon as well as two improved TOW vehicles.

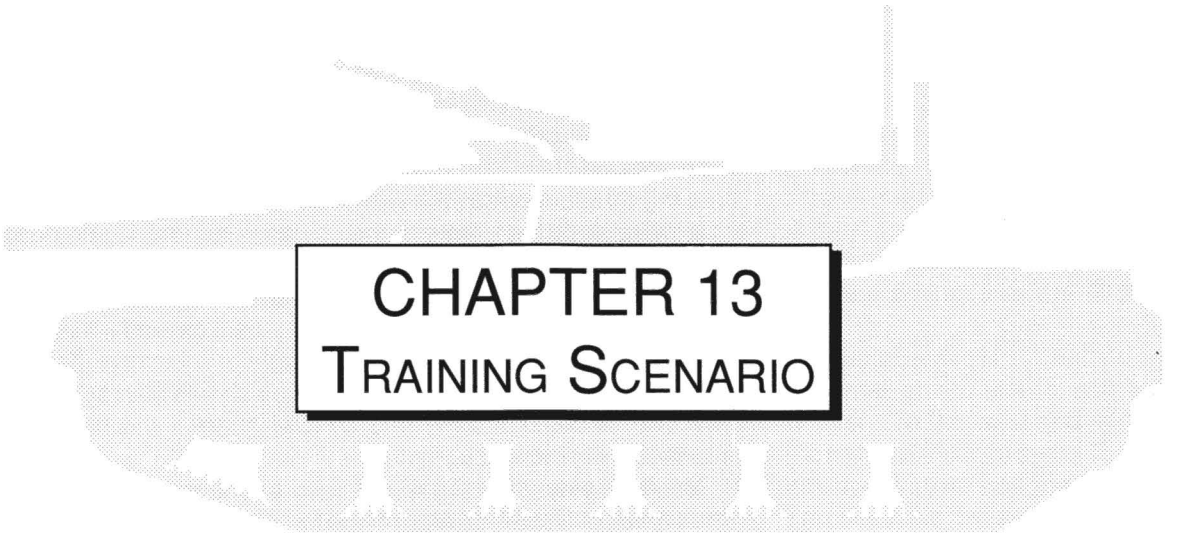
Thermal Sight: A sight that detects the heat emitted by an object and translates that heat into a visible image for the gunner or the tank commander.

TOW: Short for tube-launched, optically-tracked, wire guided antitank guided missile. The TOW is the U.S. Army's current heavy antitank guided missile with a range of nearly 4000 metres. The guidance system provides a high probability of hitting a tank-sized target out to its maximum range. A TOW missile can only be launched from a static vehicle.

Track: This term can be used either to refer to the caterpillar tracks of a vehicle, or any tracked vehicle, other than a tank. For some perverse reason tanks, although having tracks, are not referred to as 'tracks'.

Warsaw Pact: A now outdated military alliance founded by the European Communist countries to counter NATO.

WAR IN THE GULF



CHAPTER 13
TRAINING SCENARIO

13 - TRAINING SCENARIO

Because of the urgency of your mission in Kuwait, we're putting you through a 40 minute tank assault test to get you prepared. If you follow these instructions, and get through the scenario, then we know we've done our best, whatever happens.

Click on the Practice icon on the filing cabinet, and you will go straight into the briefing screen. Turn to Chapter 7 and read through how this operates. Read the three page brief, and look at the map of the training ground. Click on the information icon to gain more details about the layout. Click on the artillery icon, and you will see the artillery setup. Leave HE and DPICM barrages alone, but you can play with mines to see their effect if you wish. Now click on the upper left icon and get into training!

Keep an eye on Chapter 8 of the manual for all the information about the operation of these screens as we progress. Click on the zoom icon of Unit 3 and rotate your view of the area (either using the compass arrows or your right mouse button with the cursor over the view), until you get a tank on the main road in view. This is one of Unit 1's tanks. Now rotate the view of unit 1 and notice how the turrets move in the view from Unit 3.

Now, click on the centre of the compass for unit 1, and notice that the turret rotates to face the direction of the main body of the tank. Click on zoom and you will see a church right ahead of you. There should be a lot of banging in the background - this is an artillery barrage. Unit 4 is looking straight at a factory. Zoom in on the house just to the left of this and you should start seeing the effects of a combined HE and DPICM attack - the house will eventually get blown up.

Now just play around and get used to changing between the three types of display on each of the four tank units - see how they all work quite independently. Go to a map view and click in and out on the magnification icons and get used to scrolling around the map using your right mouse button.

At about 09:19 hours a display of vehicles will be presented to you on the brown track just in front of unit one. To see this best go to the full screen 3d view for Unit 1 (by clicking on the icon at the top left corner of the screen while in 3d zoom mode). Get used to tracking the vehicles as they pass, and get a good look at them.

Once the drive-past has finished (about 09:23), it's time to start moving. Go to the map view for Unit 1. Zoom in until you get to a map range of 0.5, and you will see that each individual tank is displayed on the map. Now scroll the map rightwards until you see the point where the road turns. Set your cursor on this point, and

set your speed to maximum. You will get up to a maximum speed of 39 MPH on the road, but this will be reduced nearby the track as you pass it. Now turn to the 3d view and watch the world go by. As you pass the bridge you will see a red STOP sign appearing on the middle of the track. Turn off your ZOOM, and try to stop just in front of the sign by clicking on the DEAD STOP icon. Now turn zoom back on and try to locate and identify the four nearby vehicles. Two are American and two belong to the enemy. Go to the map screen and you'll see two enemy flags. Now you can try a useful feature. Click on top of one of the flags (making sure you're not moving!), go back to the 3d view and click on the centre of the compass. You should see a correctly identified enemy vehicle (BMP-2) in view. Click on one of your weapon icons, and see if you can destroy the BMP. Now look around and you should be able to spot a radar station and two food dumps. See how many missiles it takes to destroy the radar station.

Now it's time to get your other Units moving. The aim of this training scenario is to get you used to controlling all four units together. The idea is to traverse the circuit - on the roads - anti-clockwise. Each time you pass a red stop sign in the middle of the road, then you should leave one unit behind. We'll leave you to get the other units on the road, and past Unit 1. You'll notice that none of your units achieve their full road speed unless you alter their formation to COLUMN. This is because some of the vehicles will otherwise be off the road - so make sure that they are all in column formation.

When you reach the second stop-off point, leave Unit 2 behind. Unit 2 should be able to identify two small ammo stores, and a communications aerial to the north west. To the west and east there are two units of tanks which are rather difficult to spot. Turn on your infra-red, and you will see why infra red imaging is so important for the modern tank. You will have to learn how to identify vehicles by their thermal image - and there's no better time to start than now. To give you a guide, there are M113's to the east and BTR-60s to the west. Try to destroy the BTR's. On the map you'll see a building to the North East. Centre your view on this and you'll see a Warehouse. If you destroy it two BMP's will come out and very slowly come towards you. See if you can destroy a moving tank. It won't be so easy in battle!

Now move Unit 3 up to the next stop off point in the North East corner of the battlefield. You'll see a satellite dish, some helicopters, two fuel stores, a group of T-62s and a group of M2 Bradleys. See what it takes to destroy the enemy vehicles and installations. If you go to your map view, you will also see two moving enemy flags to the north west. These are spotter vehicles. They are

converted BTRs, and move at fairly high speed. See if you can destroy them both. You'll find that it will be easier if you use infra red AND your laser ranging device. BTRs are very small, even on zoom at that distance (almost 2 kilometres!).

Now, move Unit 4 round to the final position. You will have to go through a track. See if you can keep to the track at all times. At the centre of the forest/dune you should try to spot and destroy a T72. At the final stop off point look out for the vehicles and the hospital. Now, spot the statue on the perimeter of the forest/dune area you have just come out of. Move as close to it as possible. You will see that you are still out of the forest/sand dune, and yet if you look at your tanks on the highest level of magnification on the map, they should be just inside the area of map forest/dune. This area around all forests/dunes in the game (a concentric ring of about 75 metres) allows you to see all of the action, and yet provides you with protection from being spotted by the enemy. The only proviso is that if you fire at an enemy vehicle, then they will probably see the smoke from your gun barrel, which allows them a spot on you for about 10 seconds. Make sure that you use tree lines to good effect when you try to retake Northern Kuwait.

Now, it's time to see if you can use all four units at once in action! When the clock reaches 09:51 each of your four units will have one set of very slowly moving enemy vehicles to destroy within range. Try to destroy them while using the quadrant views. You will find that there has been a smoke barrage set up obscuring the view of Unit 4, so you will have to turn to infra red, at least for that unit. If you can destroy most of the moving enemy tanks then you will have 'won' this training 'battle'. It means that you can now progress to the retaking of Kuwait.

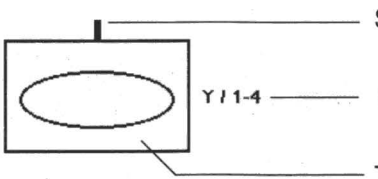
If you don't feel confident at this point, why not try and repeat your training. The action in a real battle will be far quicker. And also the enemy will be properly armed, and that means that you are going to be shot at as well!

Good luck on Kuwait!

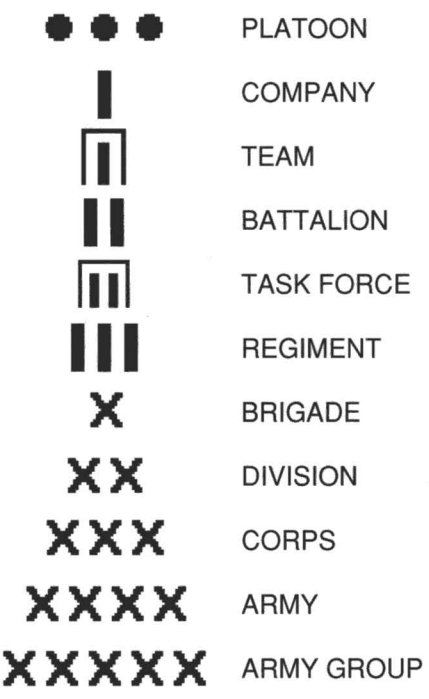
WAR IN THE GULF

CHAPTER 14
NATO MILITARY SYMBOLS

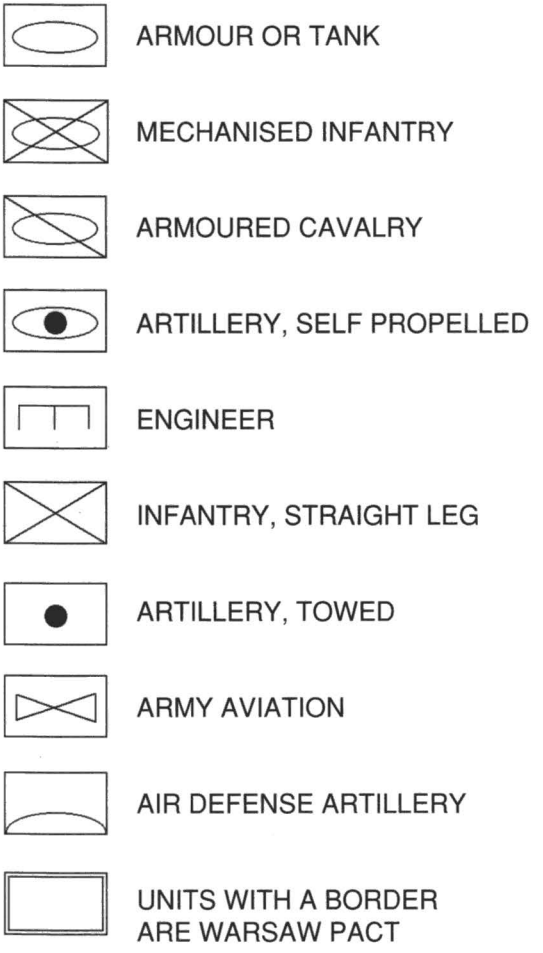
14 - NATO MILITARY SYMBOLS



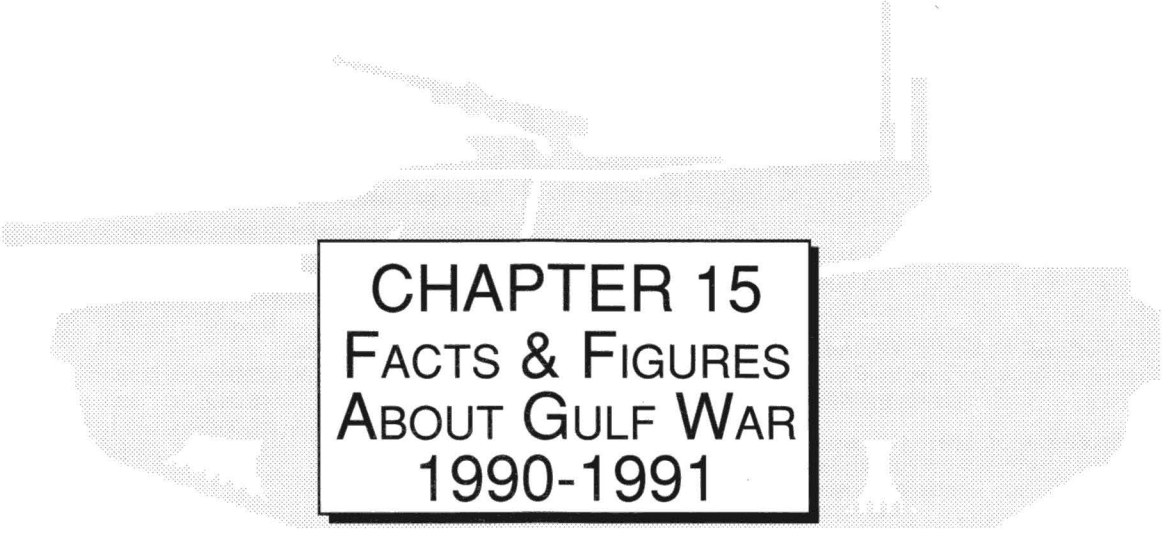
UNIT SIZE



UNIT TYPE



WAR IN THE GULF



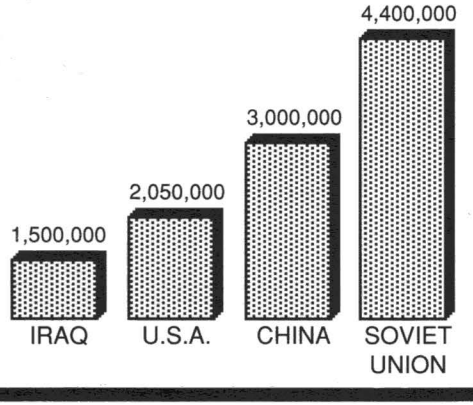
CHAPTER 15
FACTS & FIGURES ABOUT GULF WAR 1990-1991

15 - FACTS & FIGURES
THE GULF WAR 1990-1991

UNITED NATIONS KEY RESOLUTIONS AGAINST IRAQ FOLLOWING IT'S INVASION INTO KUWAIT

Date	No	Resolution
August 2	**660**	UN condemn Iraqi invasion of Kuwait, & demand withdrawal.
August 6	**661**	UN impose sanctions on all trade to and from Iraq except for medicine and some foodstuffs.
August 9	**662**	UN declare Iraq's annexation of Kuwait as null and void.
August 18	**664**	UN demand Iraq allow foreign nationals to leave Iraq and Kuwait and rescind its order to close diplomatic missions in Kuwait.
August 25	**665**	UN permit limited use of naval force to ensure compliance with economic sanctions.
September 13	**666**	UN approve food shipments to Iraq and Kuwait for humanitarian purposes.
September 16	**667**	UN condemn raids by Iraqi troops on French and other diplomatic missions in Kuwait.
September 24	**669**	UN entrust sanctions commitee to evaluate requests for assistance from other countries suffering from the sanctions.
September 25	**670**	UN prohibits non-humanitarian air traffic into Iraq and Kuwait.
October 29	**674**	UN asks states to document human rights violations and financial losses resulting from the invasion.
November 28	**677**	UN secretary-general is asked to safe-guard a smuggled copy of Kuwait's pre-invasion population register.
November 29	**678**	UN authorises states to use all neccessary means against Iraq unless it withdraws from Kuwait on or by January 15.

THE WORLD'S 4 LARGEST ARMIES
Figures of Manpower at the time of the Gulf War



MULTINATIONAL AND IRAQI FORCES DEPLOYED DURING THE GULF WAR

	TROOPS	COMBAT AIRCRAFT	SHIPS
Multinational Force			
UNITED STATES	425,000	1200+	65
GULF STATES	145,000	330	36
EGYPT	40,000		
GREAT BRITAIN	25,000	54	17
FRANCE	15,200	42	7
SYRIA	15,000		
PAKISTAN	7,000		
BANGLADESH	2,000		
MOROCCO	1,200		
SENEGAL	500		
NIGER	480		
SIERRA LEONE	200		
CZECHOSLOVAKIA	170		
HONDURAS	150		
ARGENTINA	100		
CANADA		24	2
ITALY		10	5
NATO MEMBERS			10
AUSTRALIA			2
SOVIET UNION			2
TOTAL	**695,000+**	**1,650+**	**174**
Iraqi Force	**540,000**	**665**	**0**

GULF WAR 1990-1991 CHRONOLOGY

July 18 Iraqi foreign minister Tariq Aziz tells Arab League that Kuwait has stolen $2.4 billion worth of Iraqi oil

July 24 Iraq sends thousands of troops to Kuwaiti border

Aug 1 Crisis talks collapse in Jeddah between Iraq and Kuwait over Saddam's claim

Aug 2 Iraq invades Kuwait. Emir flees to Saudi Arabia. United Nations Security Council condemns invasion and demands withdrawal

Aug 6 UN imposes economic sanctions and trade ban on Iraq

Aug 7 United States orders in combat troops

Aug 8 Iraq annexes Kuwait. Bush says 'a line had been drawn in the sand', and 60,000 troops may be sent to Saudi Arabia

Aug 10 Iraq orders foreign embassies in Kuwait to close. Twelve Arab states agree to send Pan-Arab forces to Saudi Arabia

Aug 11 First British aircraft arrive in Saudi Arabia

Aug 15 Saddam announces deal with Iran to end final disputes over Iran-Iraq war

Aug 16 Iraq orders thousands of Britons and Americans to report to hotels in Kuwait or be rounded up

Aug 17 Iraq announces 'human shield' policy for hostages

Aug 18 100,000 refugees have crossed into Jordan. US warships fire first shots across bows of Iraqi tankers

Aug 23 Saddam appears on television with British hostages

Aug 24 Iraqi troops surround embassies in Kuwait City which have refused to close

Aug 25 UN Security Council authorises use of force by Western navies to impose sanctions

Aug 28 Iraq declares Kuwait its 19th province. Orders all Western women and children held hostage to be freed

Sep 9 Bush and Gorbachev meet in Helsinki to discuss Gulf crisis

Sep 21 Iraq vows 'mother of all battles' if attacked

Sep 25 UN Security Council orders air blockade of Iraq

Oct 3 Saddam tours Kuwait in first known visit since invasion

Oct 9 Oil prices hit $40 a barrel

Oct 23 Iraq says it will free all French hostages; former British prime minister Edward Heath leaves with some British hostages

Nov 8 Bush orders more than 100,000 extra troops to Gulf

Nov 22 Bush spends Thanksgiving with troops in Saudi Arabia. Britain announces it will send an extra 14,000 soldiers and more warplanes

Nov 28 Kuwaitis tell UK that emirate is being ruthlessly plundered and its people brutalised

Nov 29 UN Security Council votes (12-2) to authorise use of force against Iraq if it does not withdraw by 15 Jan, 1991. US to send extra 300 warplanes to Gulf

Nov 30 Bush invites Aziz to Washington and offers to send James Baker, secretary of state, to Baghdad

Dec 2 Baker says sanctions against Iraq may never work

Dec 6 Saddam orders release of all foreign hostages

Dec 19 UN General Assembly condemns Iraq for human rights violations in Kuwait

Dec 22 Iraq says it will never give up Kuwait and will use weapons of 'mass destruction' if attacked. Nineteen US sailors drown returning to carrier after shore leave in Israel

Dec 25 Bush told US forces not ready to attack until February

Dec 28 US amphibious task force heads for Gulf

Jan 3 Bush tells Iraq to attend talks in Switzerland within a week or face war

Jan 8 Pentagon says more than 360,000 US forces in region; total to reach 430,000 by end of January

Jan 9 Talks collapse between Baker and Aziz in Geneva. Aziz promises that Iraq will attack Israel if war starts

Jan 12 Congress votes for war

Jan 13 UN Secretary General Javier Perez de Cuellar fails to persuade Saddam to leave Kuwait

Jan 14 Saddam tells Iraqis to fight until death to hold on to Kuwait

Jan 15 Deadline expires

Jan 17 Allies start air war with thousand of raids on Iraqi targets, including Baghdad

Jan 18 Iraq fires eight Scud missiles at Israel

Jan 19 Three more Scuds hit Israel; US airlifts Patriot missiles to Tel Aviv

Jan 20 Iraq parades captured allied pilots on television

Jan 21 Iraq says PoWs being used as human shields

Jan 23 General Colin Powell says 'first we're going to cut it (Iraq's army) off, and then we're going to kill it.'

Jan 25 US accuses Iraq of 'Eco-terrorism' by pumping oil into Gulf

Jan 26 First Reports of Iraqi planes fleeing to Iran

Jan 29 Iraq says it has captured border town of Khafji

Jan 31 Saudis recapture Khafji

Feb 6 French claim bombing reduced Republican Guard to Thirty per cent

Feb 11 Iraq says it will never accept a ceasefire

Feb 12 Soviet envoy Yevgeny Primakov in Baghdad for peace talks

Feb 13 Allied bombers hit Baghdad shelter full of civilians, killing 314. US troops in region reach 514,000

Feb 15 Iraq makes formal proposal to withdraw, but Bush calls it 'cruel hoax'

Feb 18 Gorbachev meets Aziz in Moscow to discuss peace plan

Feb 19 Massive air raid on Baghdad

Feb 21 Gorbachev telephones Bush with details of peace plan. Saddam makes speech vowing never to surrender

Feb 22 Moscow says Iraq has accepted eight-point peace plan; Bush says it does not go far enough and tells Iraq to comply with all UN resolutions by 1700 GMT on February 23 or face land war

Feb 23 Deadline expires with no sign of withdrawal

Feb 24 Land war beings at 0100 GMT; Iraqis surrendering in thousands

Feb 25 Allies advance on all fronts; Iraqi Scud missile kills 28 US servicemen and injures 98 in Dhahran. Allies say more than 600 oil well fires burning in Kuwait

Feb 26 Iraq announces it is withdrawing from Kuwait. UN Security Council goes into closed session at Soviet request. Saddam in address on Baghdad radio says Kuwait is no longer part of Iraq. Marines enter Kuwait City

Feb 27 Bush declares victory; orders allied operations to end at 0500 GMT local time

March 3 Allied and Iraq commanders meet and agree permanent ceasefire

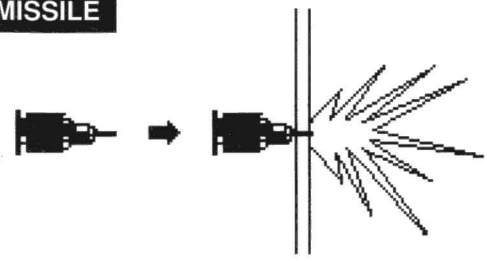
March 4 Kuwait's crown prince Sheikh Saad al-Sabah returns

March 14 The emir returns to Kuwait City

ANTI-TANK WEAPONS

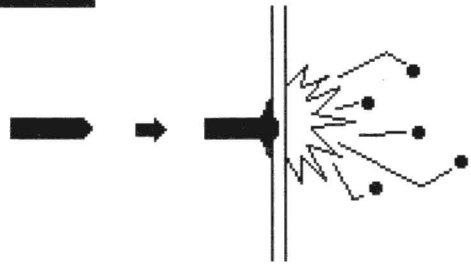
HEAT MISSILE

The HEAT (High Explosive Anti-Tank) missiles warhead base detonates at the point of impact which effectively sprays molten metal into the tank.



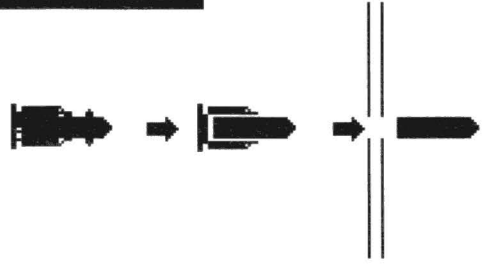
HESH MISSILE

The warhead on a HESH (High Explosive Squash Head) missile has a special tip which squashes and detonates on impact. This causes the interior of the tanks shell to break free and ricochet around inside the tank.



SABOT MISSILE

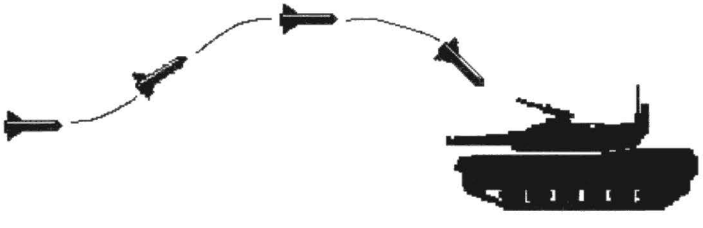
The APDS (Armour Piercing Discarding Sabot) missile has an aluminium casing or Sabot (boot in French) which comes off and is discarded in flight. The inner of the missile is a single piece depleated uranium rod which penetrates the tanks armour at high velocity.



TOW MISSILE

The TOW (Tube-launched, optically-tracked, wire-guided) missile can launched from a helicopter, tripod or ground vehicle.

1) Gunner lines up target in the optical view finder.
2) Missile is launched.
3) Gunner tracks the target in his view finder until missile strikes target.



BATTLE NOTES