

## Appendix A - TacOps Tutorial

This is a hands-on tutorial on how to play TacOps. The tutorial offers the fastest path to enjoyable play. The mouse and dialog procedures used to give orders to your units are simple and quick once you understand them, but they may be hard to grasp if you skip the tutorial. The tutorial assumes that you are familiar with your computer's operating system and that you know how to open, close, save, and quit programs and how to use a mouse with windows and dialogs. If you are not familiar with these operations or the terms open, close, select, drag, click, menu, window, and dialog, please refer to your computer's operating system user's guide.

**IMPORTANT.** There is an information bar at the bottom of the TacOps screen. You should watch that area carefully while you are learning the game interface. You will usually find a textual hint there on what to do next when the program is waiting for input from you during a multistep procedure. At other times you will see useful notes about what is going on in the game as well as information about friendly or enemy unit markers.

### Starting the Program

➤ Load and run the program by double-clicking on the TacOps program icon or by selecting TacOps in the Windows Start menu.

A dialog will appear asking you to choose between playing a solitaire game, a two player game using one computer, a game using two or more computers linked by a Local Area Network, or a two player game using mail or Email.



➤ Select **Solitaire**

☛ Select **Standard Scenario**

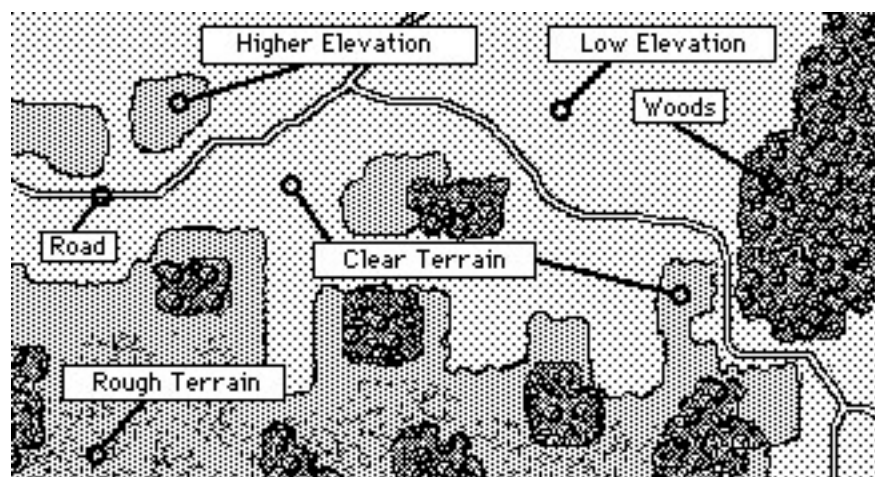
☛ Select

The standard dialog for opening files will appear.

☛ Open the folders TacOps/Battles/US. Double-click on the file titled "Basic Training US.sec" [Macintosh - "Basic Training US"]. This will load the Basic Training scenario.

After a brief pause, the screen will display the battle map.

### Battle Map Terrain Features



Areas with regular dot patterns are clear, even terrain. Areas with a jumbled dot pattern are rough, uneven terrain. There are two terrain elevations in TacOps - low and higher. Light color marks low ground. Dark color areas represent higher ground. The very dark and irregular areas are woods. Roads are black bordered, white lines. Movement is fastest on a road, less in clear terrain, much less in rough terrain, and slowest in woods. A unit is most visible to the enemy (i.e. likely to be seen and fired on) in clear terrain, less in rough terrain, and least visible (sometimes invisible) in woods. In all terrain, a firing or moving unit is more visible than a non firing or stationary unit. Range or distance also effects visibility. The greater the distance, the less chance there is of being seen.

**Important note:** if a unit's center point is in town or woods terrain and it is more than 100 meters from the edge of the town or woods, the unit will not be able to see out of the town or woods nor can it be seen by non adjacent units. However, a unit whose center point is positioned in the first 100 meters (ten pixels) along the edge of woods or town gets the benefit of being in the woods or town for defensive purposes and can both see out and be seen.

High ground in TacOps has a similar 100 meter zone along the contour lines. A unit whose center point is located in the first 100 meters of high ground (i.e. up slope from the contour line) can see into low ground and into high ground and can be seen from both low ground and high ground. Beyond 100 meters it can only see high ground and can only be seen from high ground.

You will need to experiment a bit to get a good feel for how wide these special areas appear on your monitor. Use the **Map/Line of Sight Check** menu item for help in this.

### Scrolling the Map


The map window shows only a portion of the available battle area. To view other portions of the map you scroll the screen with a hand-cursor (as in many 'paint' programs), or by using the scroll bars on the right and bottom of the screen, or by using the keyboard arrow keys. Follow the instructions below for scrolling practice. For now, avoid clicking in the dialog that you see in the upper left corner of the screen.


 To practice screen-hand-scrolling, press the space bar once.


A hand-shaped cursor will appear on the screen.

 Press and hold down the mouse button. Move the mouse to the left a couple of inches and release the button.


The map should slide to the left revealing new terrain on the right side of the screen. If you inadvertently double-click the mouse or press the space bar again, the hand will disappear. Just bring it back with another press of the space bar.

 Repeat in other directions until you are comfortable. When finished, hand-scroll the map window to the upper left corner.

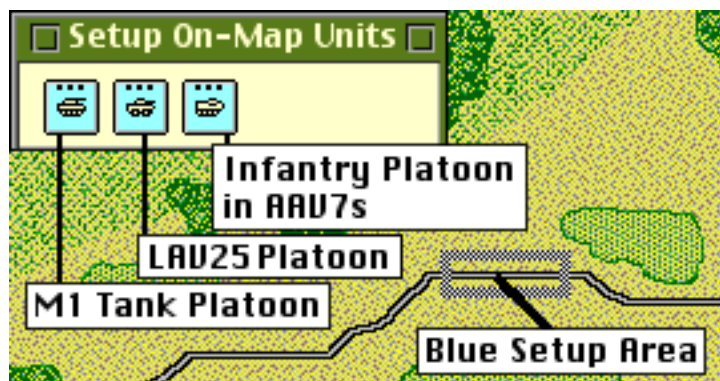
 If the hand is still visible on the screen, either click the mouse button or press the space bar until the hand disappears.

 To practice arrow-key-scrolling, press the left, right, up, and down arrows on the keyboard.

The map should slide left, right, up, or down with new terrain appearing with each key press.

 Repeat in various directions until you are comfortable. When finished, arrow-scroll the map window back to the upper left corner.

## Initial Unit Setup



You should now see on your screen a window similar to the one above. This is the **Setup Window**. The **Setup Window** contains the units available to you for this scenario. Each small square with a vehicle or personnel silhouette in it is a unit. The small gray rectangle on the right is a Blue Force setup area. Opposing Force (OPFOR/Red Force) setup areas are black. Whenever you see such a rectangle at the beginning of a scenario you must start your units within its limits. Usually your setup up area will be much larger and may consist of several rectangles or polygons in different areas of the map. Sometimes there will be a deployment limit line that runs the length of the map. If so, you may setup anywhere on a specified side of that line. If there is more than one start-up area, you are free to place your units in any or all of them. The first time you play a scenario, you should scroll the map around a bit to make sure you are aware of all the possible setup areas. Notice that the **Setup Window** can be dragged if you want to view or put a unit in the terrain that it covers.

➤ Drag the **Setup Window** around a bit. Return it to the upper left corner when satisfied.

Notice that the **Setup Window** contains three units. The left most unit is a M1 tank platoon, the center unit is a platoon of Light Armored Vehicles Model 25 (LAV25), and the rightmost unit is a platoon of Assault Amphibian Vehicles Model 7 (AAV7). You can't see them at this point but the LAV25 and AAV7 units are transporting several infantry units. You will learn later how to unload an infantry unit from a vehicle.

➤ Move the cursor to the LAV25 unit symbol and click the mouse button once only.

The LAV25 symbol will be highlighted to indicate that it has been selected.

➤ Move the cursor to a point just inside the right edge of your setup area on the map - inside the gray rectangle - and click once.

If you clicked correctly within the setup area, the LAV25 symbol will move from the **Setup Window** to the point where you clicked in the map window.

If the unit did not go exactly where you thought it would, you can reposition a unit on the map by clicking once on the unit and once on the map at a new point.

- Click once on the LAV25 unit symbol that you just placed in the setup area.

The symbol should be highlighted.

- Move the cursor to the left side of the setup area and click the mouse button once.

The unit should move to the new setup point.

- Return the LAV25 unit to the right side of the setup area.

As done with the LAV25 unit, place the M1 tank unit at the center of the setup area and place the AAV7 unit on the left side of the setup area in the **Map Window**. For each unit, click once on the unit symbol and once in the setup area.

When the last unit has been moved from the **Setup Window** to the **Map Window**, click in the close box of the **Setup Window**. The window will disappear. With the **Setup Window** gone, clicking on a unit will no longer select that unit for repositioning. In order to reposition a unit now, you must hold down the shift key as you click on the unit. If you don't hold down the shift key as you click on a unit, a **Unit Orders Window** will appear. For now, if you should inadvertently open a **Unit Orders Window** just close it.



Your deployment should look as shown above. If it does not, you should reposition your units. Remember, to reposition a unit now, you must hold down the Shift Key as you click on the unit symbol.

- Hold down the Shift Key while clicking once on the M1 tank unit symbol.

The M1 unit symbol should be highlighted. [If instead a **Unit Orders Window** appears, it means that you did not hold down the Shift Key while clicking (or that your Caps Lock key is engaged) - close the window and try again until you get a highlighted unit symbol.]

- Move the cursor slightly to the left or right and click once again.

The M1 unit symbol should move to the designated point.

☞ Hold down the Shift Key while clicking once on the M1 unit symbol. Move the cursor slightly to the center of the setup area and click once again.

The M1 unit symbol should move to the designated point.

### Giving Orders to Units

[Note: The simplified tactics shown in this tutorial are inappropriate for most combat situations and are intended only to illustrate as simply as possible the game procedures for giving orders to units.]

You are now in the initial **Orders Phase** of the game. You are going to give orders to the LAV25 unit to conduct a road reconnaissance in an easterly then north-easterly direction. The top of the map is north, the right side is east, left west, bottom south. The LAV25 unit symbol represents three vehicles, each carrying an infantry team. The road is the white line bordered in black that should be passing under the LAV25 symbol. The only orders that you will give will be movement orders.

☞ Click on the LAV25 unit (do not hold down the Shift Key).



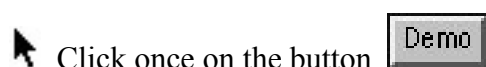
The unit should be highlighted and a **Unit Orders Window** like the one above will appear. If the highlighted unit is covered by the **Unit Orders Window**, scroll the map a bit and or drag the **Unit Orders Window** about until you can see the unit.

Once the **Unit Orders Window** is on the screen, any click made on the map while an arrow cursor is visible will give the highlighted unit an order to proceed to that point. A unit can store up to 20 orders and will later execute them in the same order as entered.

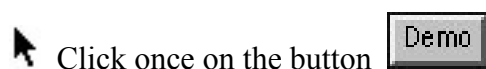
☞ Click once on the map at each of the numbered points shown below, in order from 1 to 6.



You just gave a series of movement orders to the LAV25 unit to move to point 6 by way of points 1 through 5. These orders will not be executed until the **Combat Phase**. The box in the **Unit Orders Window** labeled **Orders** shows how many unexecuted orders the unit has. It should now have a 6 in it. If it has more or less, you will have a chance to correct this shortly. You will preview the orders list by clicking the button labeled **Demo Move**.



The **Unit Orders Window** should have disappeared and the unit should have moved along the road to point 6 by way of points 1 through 5. As the unit ended its demonstration, the **Unit Orders Window** should have reappeared. You can stop a demonstration in progress by clicking the mouse before the unit executes its last order. Be careful though, if you click just as the demo ends you may inadvertently insert another movement order.



Click once on the button **Demo**. As soon as the unit starts to move, click again.

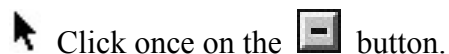
The movement demonstration should have stopped immediately and the **Unit Orders Window** should have reappeared.

### Deleting Or Changing Movement Orders



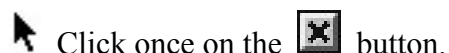
Look at the box labeled **Orders** in the **Unit Orders Window**. The number inside shows how many orders the unit has - 6 in this case. The button labeled "-" on the left of this number will delete the last order in the unit's orders list.

If you click the button labeled "X", all orders in the orders list will be deleted.




Click once on the **-** button.

The number in the orders counter should have changed from 6 to 5. The unit now has 5 orders.



Click once on the **X** button.

The number should have changed from 5 to 0. The unit now has no orders. You will now need to restore the orders that were deleted.

 As you did before, click once on the map at each of the numbered points shown above, in order from 1 to 6.

The orders counter should show 6 orders. Check your orders with the **Demo** Button.

 Close the **Unit Orders Window**.

The **Unit Orders Window** should have disappeared. Normally you would be free to give orders to any or all of your units but for tutorial purposes you should stop with the LAV25 unit.

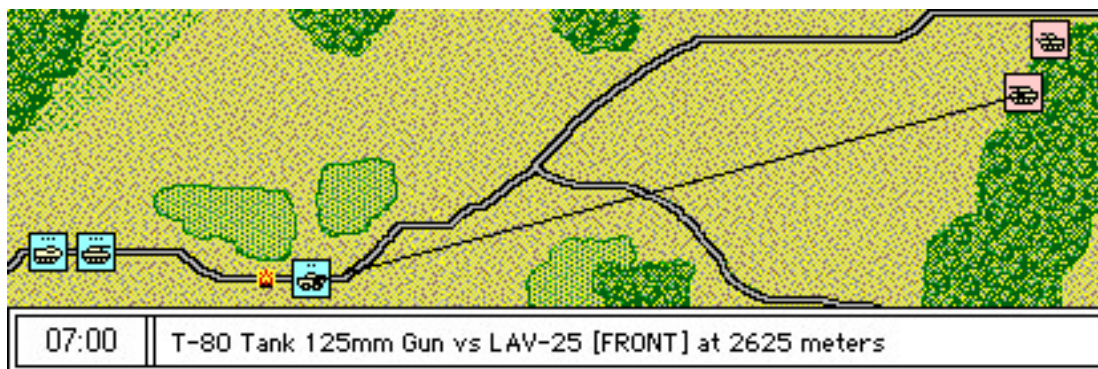
### Starting the Combat Phase

You are about to activate the Combat Phase. The Combat Phase is completely automatic. Once you start the Combat Phase, you are not permitted to give or change orders. You can scroll the screen to better view the action, but you can not do anything that will influence the action. The Combat Phase will last for one scale minute. You will be advised when it is over by a beep and a message at the bottom of the screen.

The computer resolves combat randomly based on the percentage chance of a given event happening under various circumstances. Accordingly, the Combat Phase may not turn out exactly as described below. From this point on, don't worry if the tutorial illustrations don't match your screen perfectly or if you can not follow the instructions exactly because a unit has been eliminated, just do the tutorial activity with another unit. The important thing is to follow the general guidelines while learning the game mechanics.

This is approximately what you will see during the Combat Phase if you have given the correct 6 orders. The LAV25 unit will move East along the road. As it moves past the protection of a small hill it will be fired on by a T80 tank and a BMP2 armored personnel carrier. The LAV25 unit may lose a vehicle or two. You may see surviving infantry bail out of burning vehicles. The LAV25 unit may fire several times at the BMP2 but will likely not get a kill. Whenever a unit fires you will see a line drawn from the firing unit to its target (see illustration below). You will also see a brief message at the bottom of the screen naming the firing unit, the weapon in use, the angle of possible impact on the target unit (i.e. fire is against the front, side, or rear of the target), and the range. Sometimes the action and messages may be rapid. If you want to pause the action, just press the space bar as if to initiate a hand-scroll. As long as the hand-cursor is on the screen, all game activities stop. To continue, press the space bar until the hand disappears.





➤ Select the '**Begin Combat Phase**' item in the **Combat** menu. Watch the action and wait for a beep and a screen message signaling the end of the phase.

You are now again in an **Orders Phase**. Your screen should show a scene like the one in the left corner of the next illustration.

➤ Open the **Unit Orders Window** by clicking on the LAV25 unit. Scroll the map and drag the **Unit Orders Window** so that your screen matches the next illustration.

Note that the orders counter probably shows 3 or 4 orders. During the Combat Phase the LAV25 probably completed 2 or 3 of its 6 movement orders. As a unit fulfills an order during the Combat Phase it automatically deletes that order. Unfulfilled orders remain in the list and if not changed will be acted on in the next Combat Phase.




You will now try to get the LAV25 out of trouble with a smoke screen and a fast dodge behind a hill.

You want to order the LAV25 to fire smoke grenades and retreat, but first you need to get rid of the three orders still in its orders list. Your units execute their orders in a first-in-first-out

sequence. If you don't cancel the leftover orders from the last Orders Phase the LAV25 will continue on toward the enemy.

☞ Click the button  in the **Orders** box so that the number in the box shows zero.

☞ Click the smoke button  in the Delayed Orders Controls box.

You just ordered the unit to fire smoke grenades or smoke dischargers.



☞ Click on the map at points 1 and 2 (in that order) as shown on the right. Be careful not to click in the gray area that marks the high ground or you may stray back into sight of the enemy.

You just gave two movement orders.

The **Unit Orders Window** has two kinds of buttons - delayed action and instant. Only the buttons inside the box labeled **Delayed Orders Controls** give orders that will be executed during the Combat Phase. All other buttons produce an instant, observable action during the Orders Phase.

The orders counter should now show 3 orders.

☞ Double check your orders by clicking the **Demo Move** button.

Once again you will only give orders to the LAV25 unit. For now, leave the M1 tank unit and AAV7 unit alone.

☞ Close the **Unit Orders Window**.

☞ Select the **Begin Combat Phase** item in the **Combat** menu. Watch the action and wait for a beep and a screen message signaling the end of the phase.

The LAV25 unit may or may not have made it to safety. You may have seen the enemy T80 tank and BMP fire on and even hit the LAV25 right through the smoke. If so, you have now learned that these units have thermal imaging sights that can see through smoke - a rough lesson. At the time of publication these units were not known to actually have thermal sights although it was known that OPFOR had the capability to add them. Many US units have thermal sights and in order to provide a more even game, a preference option was added to TacOps that gives them to

OPFOR also. You have the freedom to take them away if you are more interested in a simulation than in an even game. Consult the User's Guide for instructions on changing the preference settings.

You are again in an **Orders Phase**. You are going to order the M1 tank and AAV7 to move north until they are screened by woods and then move east through the woods to a firing point closer to the enemy. You are impatient, so you will charge across the enemy's open front, with no screening smoke and no supporting artillery fires.




Click on the M1 tank unit to open its **Unit Orders Window**. Scroll the map and drag the **Unit Orders Window** so that your screen is similar to the scene above.

Click the button 

A window will appear with information about the M1 tank unit.

Color: Blue
Tank, M1A1D - UTM 038051

Vehicles: 4  
 Unit ID: 1  
 Terrain: Road  
 Visible at 3000 meters.  
 LOS Elevation: 0  
 No Damage  
 Thermal sight.  
 Not amphibious.  
 Tracked vehicle.  
 Main battle tank.  
 Crew: 16  
 Troop Capacity: 48  
 Troops Onboard: 0  
 Length (each): 792 cm  
 Width (each): 366 cm  
 Weight (each): 62323 kg  
 Weight (total): 249292 kg  
 Tow Capacity:



**Armor Protection vs Kinetic Energy Weapons:**  
 Front: 600 Side: 410 Rear: 115  
**Armor Protection vs Chemical Energy Weapons:**  
 Front: 1300 Side: 890 Rear: 115

*Weapons*	*Useful Range*	*Rounds*
Smoke Capability:		3
120mm Gun M1A2	3500	160
12.7mm Machine Gun	2500	4000
7.62mm Coax Machine Gun	2000	24800
7.62mm Machine Gun	1500	24800

Information shown in the window's title includes:

- The type name of the unit.
- The center of the unit is located at UTM grid coordinates 038051.

Information shown on the left side of the window includes:

- M1 tank unit is made up of 4 vehicles.
- Unit identification number is 1.
- Unit is on a road in clear terrain.
- Unit is likely to be spotted at 3000 meters.
- Unit is at elevation level 0 (There are two levels - 0 is low ground while 1 is higher ground).
- Unit is undamaged and not suppressed.
- Unit is equipped with thermal imaging sights.
- Unit is not amphibious.
- The total number of crew members in the unit is 16 (4 in each tank).
- Unit can transport a total of 48 infantrymen (12 on top of each tank - carrying infantry on tanks is possible but it is often not a very good idea).
- Unit is transporting no infantry.

Information shown at the top center includes:

- Unit's basic level of armor protection on its front, sides, and rear against kinetic energy weapons (solid penetrator) and chemical energy weapons (high explosive, shaped charge). The number expresses the protection level in millimeters of Equivalent Homogeneous Rolled Steel Armor (EHRSA) (standard steel armor) and may not represent the actual armor thickness of the armor material at all. For example, aluminum armor will have a EHRSA number much lower than its actual thickness. The EHRSA number also includes average armor slope, if any. Some units with special, high tech armor have different levels of protection against kinetic and chemical energy weapons.

Information shown at the bottom center includes:

- Unit has 3 smoke grenade fires left.
- A list of the major weapons in the unit, their maximum effective or useful ranges (not necessarily their technical maximum), and the total quantity of ammunition available for each.

Click the button labeled “Info” located on the right side of the line describing the 120 mm gun.

A window will appear showing more detailed information about the capabilities of the M1's 120 mm gun.



Close the 120mm gun information window. The unit information window should reappear.

Close the unit information window. The unit orders window should reappear.


You will now give orders to the M1 unit.

Click on the map at points 1, 2, and 3 (in that order) as shown in the next illustration.





The Orders counter should now show 3 orders.

Click the button  to check your orders to the M1 unit.

If the unit does not move properly, cancel its orders and repeat order entry.

Close the **Unit Orders Window**.

You will now give orders to the AAV7 unit.

Click on the AAV7 unit to open its **Unit Orders Window**.

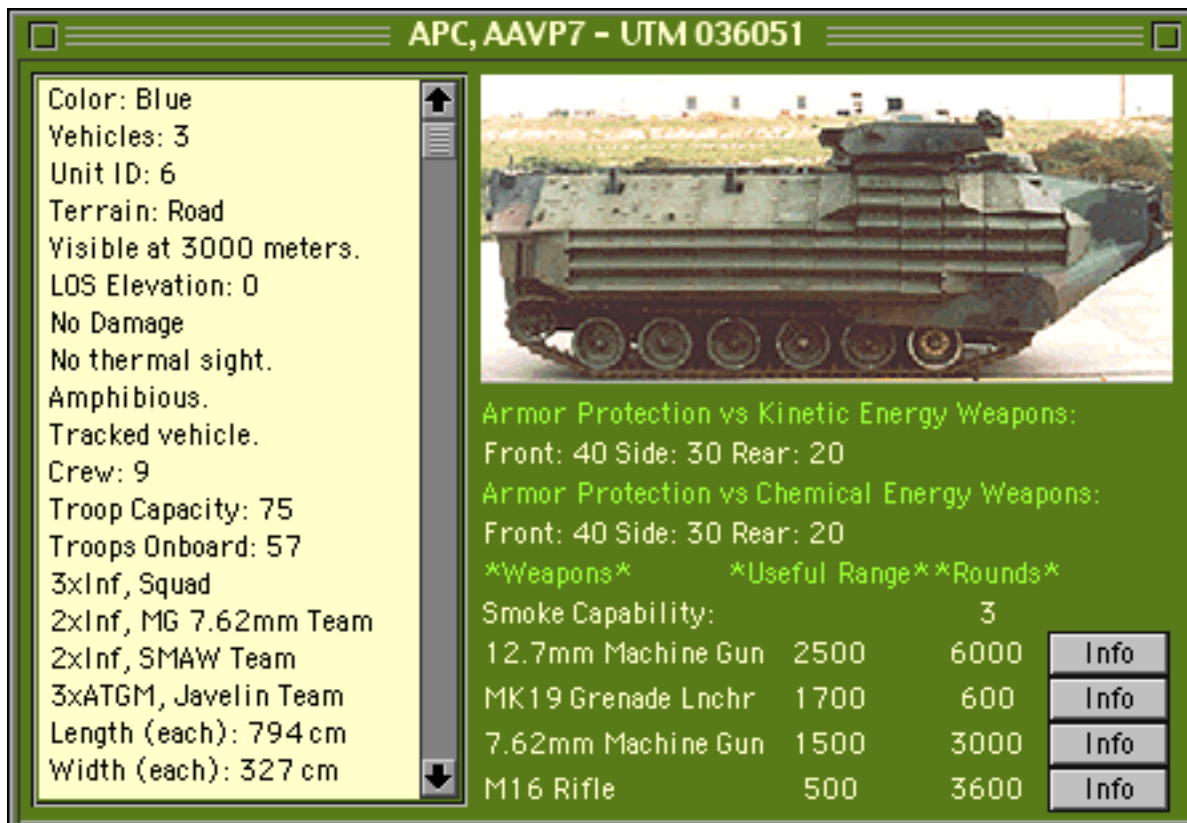


Note the line of text at the bottom of your computer screen. It is telling you that the AAV7 unit is transporting an infantry platoon, a machine gun team, a SMAW (Shoulder Launched Multi-purpose Assault Weapon) team, and a Javelin ATGM (Anti Tank Guided Missile) section.



Click the button.

Unit Info



A window will appear with information about the AAV7 unit. As you look over the window you will find a new information category. Underneath the Troops Onboard line is a summary of the infantry units being transported by the AAV7 unit.

The weapons list shows just the weapons of the AAV7 unit. In order to see the weapons of a transported unit you will have to wait until it is unloaded and you are able to open its **Unit Orders Window**.



Close the information window.

The **Unit Orders Window** should reappear.

You want the AAV7 unit to accompany the M1 unit and follow the same route. However, the AAV7 needs to wait 30 scale seconds before it starts moving so that the M1 is well in front during the movement.



In the **Delayed Orders Controls** box, click twice on the button that looks like a watch. This button will put a 15 scale second pause into the orders list for each click.

The Orders counter should now show 2 orders. You just told the unit to wait 30 scale seconds before it executes any more orders. You will now give it movement orders, but you will use a shortcut that will allow you to copy the 3 movement orders already given to the M1 unit.

The button labeled **Add Orders** starts a procedure that allows you to append the entire orders list of one unit onto the end of the orders list of another with one click. This is very useful for shortening the time needed to give orders in scenarios with many units. You will find that you will often be giving virtually identical orders to several units, particularly when you are moving a column of units down a road. Mastering the appending of orders (plus the other ways of copying and pasting orders as explained in the User's Guide) will save you a great deal of time. The unit with the **Unit Orders Window** on the screen will receive the appended orders. The orders will come from another unit that you will mark with a mouse click.

Click the button 



The **Unit Orders Window** will temporarily disappear and the arrow cursor will change to a cross hair cursor. Whenever you see a cross hair cursor, the computer is waiting for you to click on a point on the map or on a unit symbol.

Move the cross hair cursor to the M1 unit as shown and click once.

The cross hair cursor will change to an arrow cursor and the **Unit Orders Window** will reappear. You just appended the orders list of the M1 tank unit onto the end of the AAV7 unit's orders list. The **Orders** counter should now show 5 orders. Remember, you gave the AAV7 two delayed orders and then added three movement orders from the M1 unit. You should consult the User's Guide at a later time to learn other methods of copying, pasting, and appending orders.

Click the button  to check your orders to the AAV7 unit.

If the unit does not move properly, cancel its orders and repeat order entry.

Close the **Unit Orders Window**.

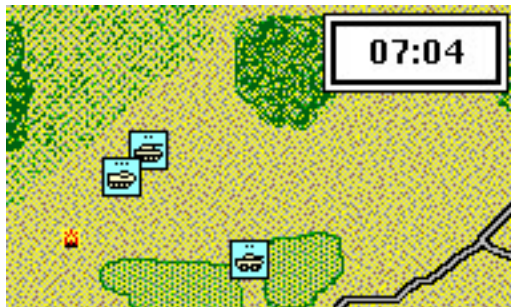
Select the **Begin Combat Phase** item in the **Combat** menu. Watch the action and wait for a beep and a screen message signaling the end of the phase.





The M1 tank unit moved north followed by the AAV7. The M1 unit probably came under fire as soon as it cleared the small hill and may have taken some losses.

☞ Select the 'Begin Combat Phase' item in the Combat menu. Watch the action and wait for a beep and a screen message signaling the end of the phase.



☞ Select the 'Begin Combat Phase' item in the Combat menu. Watch the action and wait for a beep and a screen message signaling the end of the phase.



The M1 and AAV7 continued north, ending the Combat Phase in the shelter of the western edge of some woods. The M1 probably came under fire again and may have lost another vehicle.

As both units have just about completed their orders, you will give each additional orders to move east through the woods to a position closer to the enemy.

Notice that the M1 and the AAV7 unit symbols partially overlap making it difficult to pick out the M1. When you need to pick a unit out of such a stack just click on the stack. If there is more

than one symbol underneath the click point, the stack will automatically spread out so that you can click again on the exact unit desired.

Click in the center of the M1/AAV7 stack. When the stack spreads out, click on the M1 tank unit to open its **Unit Orders Window**. Cancel any leftover orders with the X button and give it three movement orders by clicking on the map at points 1, 2, and 3. Once the unit gets to point 3, you want it to find a final position that offers the best possible cover.



Click on the **Seek Cover/Defilade** button  in the **Delayed Orders Controls** box.

This button orders a unit to seek cover or assume a defilade position. A defilade position is one that conceals a portion of the unit from enemy observation or fire. For personnel this represents going prone or seeking the protection of low spots, shell holes, boulders, fallen trees, etc. For vehicles this usually means placing the vehicle in a low spot so that the vehicle's hull is out of sight. In TacOps you can assume that a unit can always find something better than just parking in the open. Going into defilade requires a few seconds to accomplish but is always worth the effort.

Close the M1's **Unit Orders Window**.

Open the AAV7's **Unit Orders Window**, cancel any leftover orders, and use the **Get Orders** button to give the AAV7 the same orders that were just given to the M1 unit.

Select the **Begin Combat Phase** item in the **Combat** menu. Watch the action and wait for a beep and a screen message signaling the end of the phase.



The M1 and AAV7 moved east into the woods. As both were deep inside the woods, neither could be seen by the enemy and should not have been fired on.

☛ Select the **Begin Combat Phase** item in the **Combat** menu. Watch the action and wait for a beep and a screen message signaling the end of the phase.



The M1 and AAV7 continued east through the woods. During the movement the M1 may have fallen behind the AAV7 unit. If so, this would be due to the M1 unit being suppressed or distracted by earlier enemy fire. The recent enemy fire that destroyed vehicles in this unit had the side effect of making the surviving crews more cautious. This unit will move less aggressively and may have some difficulty in acquiring targets until the suppression wears off. This may take several minutes.

☛ Repeatedly select the **Begin Combat Phase** menu item until the M1 and AAV7 units stop together on the east edge of a wooded area, as shown below.



By now the M1 and AAV7 units should be together on the east edge of the woods.

### **Saving a Game in Progress**

A game in progress may be manually saved at any time during an **Orders Phase**.

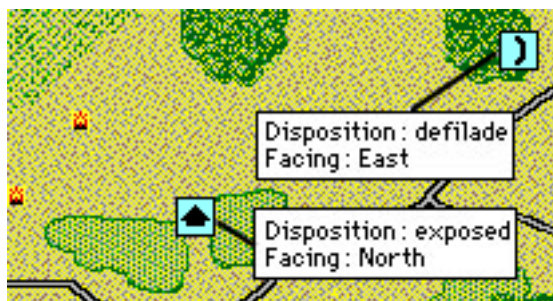
☛ Select the **Save Game** item in the **File** menu. When the standard file window appears, type in a name to save the game under or just click OK for the default name of “savegame.tac”.

Now that you have saved your tutorial efforts, a break might be in order. If you choose the break you may reload and continue the tutorial later with this saved game by clicking on the button in the opening screen titled **Saved Game**. You will return to the exact spot in the game that you are at now.

As you were selecting the **Save Game** item in the **File** menu, you may have noticed an item labeled **Auto Save**. Marking this item will result in the game being automatically saved at the beginning of every Combat/Movement Phase. **Auto Save** is the default setting and its use is very much recommended. Not only does it prevent the frustration of a long gaming session being lost if you lose power, the process of saving a game efficiently reorganizes the program's use of memory. This side effect can be very helpful to a computer with minimal memory. The file will be named "autosave.tac" and will replace any earlier automatic save file. You reload an automatically saved game in the same manner as a manually saved game.

### Tactical Disposition Symbols

- Select the **Change Unit Symbol Info** item in the **Map** menu.
- Select the **Change Unit Symbols Info** item in the **Map** menu again.



The **Change Unit Symbols Info** menu item changes unit symbols to tactical disposition symbols and back again. The M1 and AAV7 units should by now be in defilade (defilade is a tactical disposition) so they should show defilade symbols. The LAV25 unit was never given a defilade order so it still shows the arrow symbol which represents exposed disposition. The disposition symbols also reveal the direction that a unit is facing in. Facing is important because vulnerability to enemy fire varies according to facing. A unit is generally most resistant to fire to its front, less resistant on its sides or flanks, and most vulnerable from the rear. Use this feature to quickly confirm your units disposition/facing and to discover the disposition/facing of spotted enemy units.

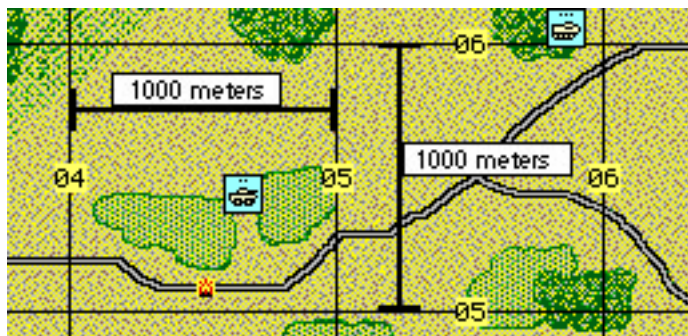
- Select the **Change Unit Symbols Info** item in the **Map** menu again.

The unit symbols should have changed back to unit symbols.

### Displaying the Map Grid

- Select the **Show 1000m grid** item in the **Map** menu.
- Select the **Show Grid Coordinates** item in the **Map** menu.





The **Show 1000m grid** menu item draws a grid on the map of squares 1,000 meters across. The grid is helpful in estimating ground distance and range between units. Precise distances can be measured with the **Line of Sight** menu item.

### Confirming Line of Sight

Units can only see and fire at each other when there is a clear line of sight between them. Line of sight can be blocked by intervening woods, towns, large structures, and higher ground. The **Line of Sight Check** menu item allows you to drag a line across the map that reveals the range between the start and end points and indicates if the line of sight along the line is clear or blocked.



Select the **Line of Sight Check** item in the **Map** menu.

A cross hair will appear on the map. While holding down the mouse button, click on the map and drag the cross hair around the screen. The range between the start and end of the line is shown at the bottom of the screen as well as the terrain elevation, terrain type, and the UTM grid coordinates of the end point. [UTM grid coordinates are explained in the User's Guide.] If the cross hair remains clear then the line of sight is clear. If the cross hair turns black then the line of sight is blocked. If the cross hair turns gray then there is a clear line of sight to a target point but the point is beyond the scenario's maximum visibility limit. Release the mouse button to quit.



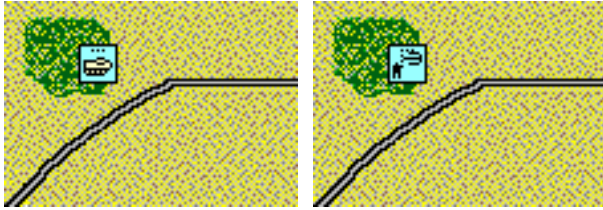
You just checked the line of sight of a unit using normal day vision – in other words eyesight. Smoke will block normal line of sight. Smoke may or may not block the line of sight of a unit equipped with a thermal imaging device. To check thermal line of sight, select the **Thermal LOS Check** item in the **Map** menu. The routine works the same from this point on.

## Unloading Personnel From Vehicles

Click on the AAV7 unit to open its **Unit Orders Window**. Remember that when several units overlap, clicking on the stack will spread the units out for further selection.

You are going to instantly unload the troops carried inside the AAV7.

Click the  button.



All units carried by the AAV7 unit were instantly unloaded.

Close the AAV7 **Unit Orders Window**.

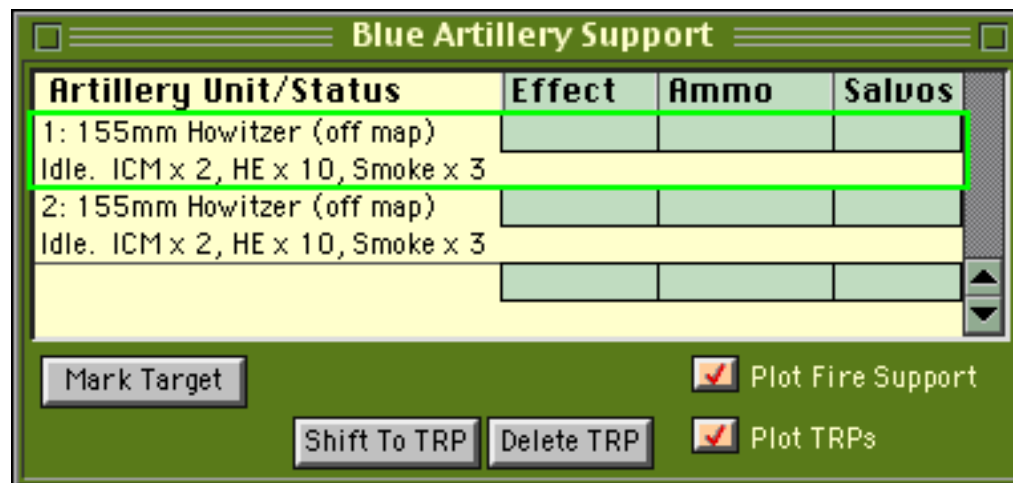
Click on the stack of unloaded units to spread it out, select each unit in turn and look over its unit information by using the **Unit Info** button in its **Unit Orders Window**.



## Setting and Adjusting Artillery Fire

☛ Select the **Artillery Support** item from the **Orders** menu.

The **Off-map Artillery Support Window** should have appeared. This window allows you to set and adjust artillery fire. Each line in the window represents an off-map artillery unit.



☛ Click in the top-left rectangle containing the words "155mm Howitzer".

This selects the first artillery unit.

You will now set an artillery fire mission target.

☛ Click on the **Mark Target** button inside the Artillery Support Window.

The **Artillery Support Window** disappeared. The arrow cursor changed to a cross hair. The program is waiting for you to click on the map where you want the artillery fire to impact.


☛ Click on the point shown in the illustration to mark the target.



The cross hair cursor changed back to an arrow and the **Artillery Support Window** reappeared. The artillery aiming point is now marked with a target symbol. Until this mission is canceled or the artillery runs out of ammunition, the target symbol will be visible on the map whenever the

**Artillery Support Window** is open. The mission has been targeted but you must now specify how the mission is to be fired and what type of ammunition is to be used.

To the right of the artillery unit name there are three columns of blue gray boxes . One column is labeled “Effect”, one is labeled “Ammo”, and the third is “Salvos”. The boxes in these columns are cyclic controls – each time you click in the box a different setting appears. Currently the topmost Effect box shows “Adjust” and the topmost Ammo box shows “HE”. The first box is used to choose whether to fire adjusting rounds or to immediately fire for effect. Adjusting rounds are used to improve accuracy (assuming you have a unit observing the target) before expending large amounts of your artillery ammunition. In TacOps, adjusting rounds from off map artillery do not lower your ammunition supply when they impact, but they don't cause any casualties either. Fire for effect costs ammunition, but is the only way to inflict casualties. Normally you would allow a fire mission to impact a couple of times using adjusting rounds and then change to fire for effect.

 For now, click on the topmost **Effect** box until it displays “**FFE**” (Fire For Effect).

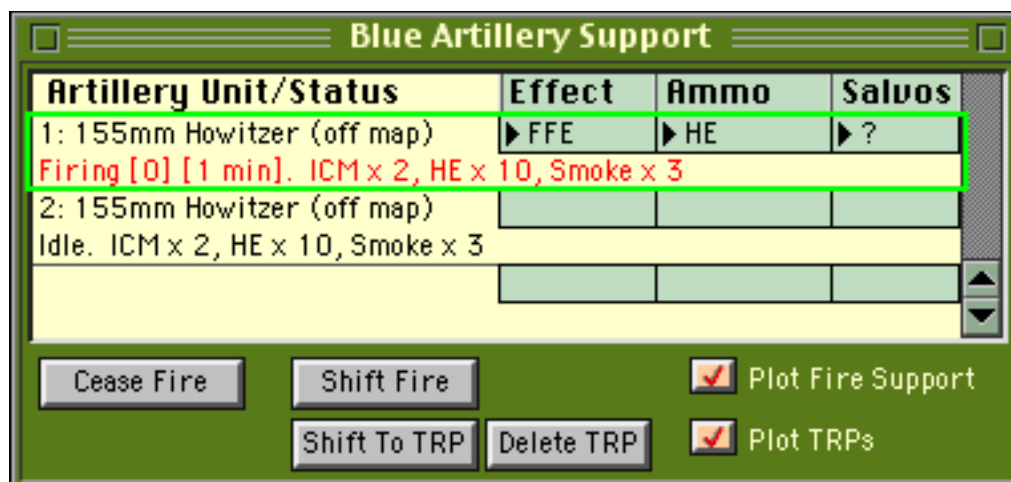
The next cyclic control – the Ammo box – is used to select the type of ammunition to be fired. Repeated clicks on the control will usually show HE, then ICM, and then Smoke. Some artillery or mortar units will not have all three types of ammo. Notice that the line underneath the cyclic controls shows what types of ammunition are currently available and the ammunition supply (expressed as number of volleys) remaining for each. **HE** means ordinary high explosive ammunition (useful against personnel but not very effective against armor), **Smoke** is self explanatory (usually blocks line of sight), **ICM** is Improved Conventional Munitions (extremely effective against armor as well as personnel). The best ammunition to use against armor or personnel is ICM but for now choose HE [for tutorial purposes we don't want to eliminate the enemy units in the woods just yet].

 Click on the topmost **Ammo** button until it displays “HE”.

The last cyclic control – the Salvos box – is used to control the number of salvos that will be fired. Currently the box contains a question mark “?” which indicates “unlimited”. When the question mark is showing then the artillery mission will be fired until it is canceled by the player or the unit runs out of ammunition. The other available settings are zero through five salvos.

Note that the **Artillery Support Window** now shows additional information about this fire mission - current accuracy level zero, one minute estimated time until impact, and type of fire.





The first number inside the brackets (currently [0]) indicates the mission accuracy level of an ongoing fire mission. Mission accuracy is a number between 0 and 5 that represents the number of times that the unit has delivered observed fire on the current target. The higher the number, the more likely the next impact will be on or near the target point. Artillery fire is “observed” when any friendly unit has a clear line of sight to the impact point. Unobserved fire is usually very inaccurate.

Although the window may indicate one minute to impact, it could actually take longer. You won't be shown the exact time of impact unless it is less than sixty seconds away. A new artillery fire mission will have a preparation delay of some minutes before the first rounds impact on the map. Once the first volley has impacted, fire will continue at intervals of about thirty seconds (longer for smoke) until the artillery runs out of ammunition, the salvo limit is met, or you cease the fire mission.

If you did everything correctly, your screen should match the previous illustration. A target symbol will be visible on the map for each plotted fire mission as long as the **Artillery Support Window** is shown. Once you dismiss the **Artillery Support Window**, the target symbols will disappear.

Repeat the steps above for the other artillery unit in the **Artillery Support Window**. Experiment with the **Cease Fire** and **Shift Fire** buttons and with the **Plot Fire Support** check box. Experiment with “right clicking” on a line in the artillery support window [Macintosh – hold down the Control key while clicking].

The **Cease Fire** button cancels the selected fire mission. The firing unit becomes immediately available for another mission anywhere on the map. Unit accuracy will be reset to zero and any new mission will suffer a preparation time delay.

The **Shift Fire** button is used to shift an ongoing artillery fire mission up to 1000 meters to a new target. The advantage in shifting fire over ceasing fire is that mission accuracy is reduced only one level per shift and there is little or no added time delay. Try shifting the same mission several times in a row. Notice that the shift limit is determined from the artillery target point that

was in effect at the beginning of the current **Orders Phase**. This prevents you from exceeding the shift limit of 1000 meters per turn.

The **Plot Fire Support** check box draws or hides existing artillery target symbols on the map. Sometimes you may want to see what is under a target symbol in order to better place another mission. Uncheck the box to hide all symbols - check the box to redraw them.

The remaining items in the **Artillery Support Window** are explained elsewhere in the User's Guide.

Notice that you can select an artillery unit by clicking on its name in the **Artillery Support Window**, or by clicking on its target symbol on the map.

Although you will not use it in this scenario, air support is targeted in a similar fashion by using the **Air Support** menu item and the **Air Support Window**.

☞ Once you are comfortable with the **Artillery Support Window**, cancel all fire missions and then reset the first artillery unit to the first mission described above.

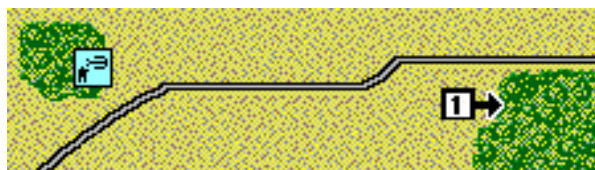
☞ Select the **Begin Combat Phase** item in the **Combat** menu. Watch the action and wait for a beep and a screen message signaling the end of the phase.

Nothing happened. The units have finished all their orders and the artillery mission hasn't arrived yet.

☞ Select the 'Begin Combat Phase' item in the Combat menu. Watch the action and wait for a beep and a screen message signaling the end of the phase.

The artillery mission should have impacted, probably with no visible effect. If none of your units can see an enemy unit at the target point then the program will not show you the effect of the strike unless a vehicle is destroyed.

## The Charge

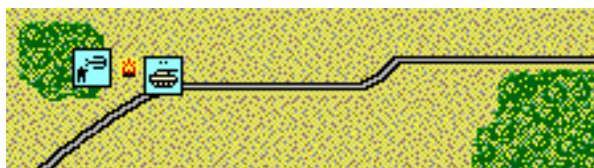


Time to clean out the woods.

☞ Open the **Unit Orders Window** by clicking on the M1 unit. Order the M1 unit to move toward the wood line by clicking on the map at point 1.

You just gave one movement order. You may have noticed that although you only gave one order, two orders are shown in the **Orders** counter. The program knows that a unit in defilade mode can't move, so it automatically preceded the movement order with an order to go into exposed mode.

☛ Select the **Begin Combat Phase** item in the **Combat** menu. Watch the action and wait for a beep and a screen message signaling the end of the phase.



The M1 unit moved out of the woods toward the enemy. As soon as it moved out of the woods it became visible and came under fire. It may have taken losses. Once the enemy opened fire, they probably became spotted and should have taken return fire from the M1 and from the Javelin ATGMs that you left in the woods.

☛ Select the **Begin Combat Phase** item in the **Combat** menu. Watch the action and wait for a beep and a screen message signaling the end of the phase.

The M1 continued toward the enemy position. The firefight continued with probable losses to both sides. You probably knocked out the enemy tank and APC (Armored Personnel Carrier). Your M1 unit may or may not have survived.

Unless your artillery was unusually effective there should still be an enemy rifle squad near where the tank and APC were. Continue on your own and assault with your infantry. Follow this general outline: load your infantry back onto the AAV7, order the AAV7 into the enemy woods between the tank and APC wrecks. Don't forget to cease your artillery supporting fires before you get too close to the enemy position. When the enemy squad opens up on the AAV7, unload your infantry, cancel all AAV7 orders, and continue the assault on foot. In the future you should consider stopping and unloading APCs before they get in range of enemy light anti armor weapons, but for now just charge in amongst them.



End of tutorial.