PLAYING OPERATION WHIRLWIND

OVERVIEW

After you have followed the previous instructions, you will see a portion of the battlefield with a text area below it. There will be a white square on the battlefield. This is the cursor, which you control with the joystick. Moving the stick will cause the cursor to move in the appropriate direction. When the cursor reaches the edge of the screen, the map will scroll in the direction indicated until the map edge is reached. Below the map is the text area. The first item indicated is the phase you are in.

Phases:
There are five phases in each game turn:
        A. COMMAND PHASE
        B. MOVEMENT PHASE
        C. COMBAT PHASE
        D. ASSAULT ORDER PHASE
        E. ASSAULT PHASE
Hitting the START key takes you from one phase to the next.

You can only encounter these phases in the above order. After the Assault Phase comes the Command Phase of the next turn.

In brief, the phases are used for the following purposes:

      Command Phase: Orders units to dig in or become combat ready.

      Movement Phase: Moves your individual units.

      Combat Phase: Sights and fires on enemy units; takes enemy fire.

      Assault Order Phase: Orders close in assaults, overruns, and bridge reconstruction.
      Assault Phase: Carries out assault orders and enemy counter assaults.

Victory Level and Save Game:
At the end of the Assault Phase, you will see the present level of victory your forces have achieved. This will be displayed briefly, followed by a prompt asking if you want to save the game at this point. Hitting the SELECT key at this time will take you to the save routine. You will then have to hit the SELECT key again to save the game. Hitting the START key will take you to the Command Phase of the next turn. The present turn will be displayed at the bottom of the screen.

Turns:
There are up to 35 "turns" in a game (that is, up to 35 sequences of these five phases). The game ends when either of two conditions is met: 1. Turn 35 is reached, or 2. The human player has units in the town and no enemy units remain in the victory area for two consecutive turns. The victory point area is the shaded area of town on the map.

There are time limits involved. Each level has a turn number that, if the player exceeds that turn, points are taken away. For levels 1 and 2, this happens from turn 20 on. In level 3 it is turn 25. There is no such turn limit in level 0. To achieve a decisive victory, it is important to take your objective within the designated number of turns.

Messages:
Between the phase indicator and the turn indicator in the test area there will appear various messages relating to activity on the map.

These messages will help you get used to the game and will carry such information as; 1. What type of unit you are moving, firing, or assaulting with along with its Movement (M), Firepower (F), and Range (R) capabilities. 2. Whether or not enemy units are on the move. 3. Whether or not one of your units is combat ready (activated) or digging in. 4. Whether or not a unit is firing outside its range or out of its line of sight. 5. When mines have been encountered by one of your moving units, and other such events that are mainly self-explanatory and are explained in the table below.

You may freeze all but three of these messages by pressing the joystick fire button and holding it down. The message will remain on the screen until you release the button.

The three messages that may not be held in this manner are: 1. The message indicating mines have been encountered. 2. The message indicating that a firing unit cannot sight the target, and 3. The victory level.

MESSAGE	MEANING
****MINES****	The unit you are currently moving has encountered enemy emplaced mines and is temporarily disrupted.
UNIT COMBAT READY	Seen in the Command Phase when the cursor is placed over a friendly unit and the fire button is pressed. It indicates that that unit is active and can perform all of its activities.
DIGGING IN	Seen in the Command Phase when the cursor is over a friendly unit and the fire button is pressed. It indicates that the unit is regrouping and setting up a temporary defense and awaiting supplies and orders.
SIGHTING IS BLOCKED TO THAT AREA	Seen during the Combat Phase when a unit not capable of sighting through woods or town attempts to fire through those areas. The cursor will be halted and the fire aborted.
TARGET AREA IS OUT OF RANGE	Seen during the Combat Phase when a unit attempts to fire at a target that is beyond its range. The firing attempt will be aborted.

CURSOR IS NOT ON A FRIENDLY UNIT	This happens in any phase in which you to try to move, fire, or order an assault and the cursor is not positioned directly over one of your units.
CURSOR IS ON A FRIENDLY UNIT	This message occurs when you try to fire on one of your own units. The fire will be aborted.

Your Forces:

Your units will be visible at the start of the game. They will be black on a white square, represented on the battle map by the following symbols:

Batallion H.Q.
M = F   F = M   R = 09

Light Tank Platoon
M = F   F = M   R = 09

Recon Unit
M = F   F = S   R = 05

Heavy Tank Platoon
M = M   F = H   R = 11

Infantry Company
M = S   F = S   R = 02
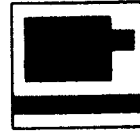
Artillery Battery
M = M   F = H   R = 40

Engineer Company
M = S   F = M   R = 02

During the game, when you highlight a unit with the cursor, the text area will display the type of unit it is along with its Movement (M), Firepower (F), and Range (R). (See M, F and R values above):

> **M (Movement)** will either equal an S (Slow), M (Medium), or an F (Fast).

> **F (Firepower)** will either be an S (Small arms), an M (Medium arms), or an H (Heavy arms).

> **R (Range)** will be given as a number from 02 to 40.

Movement (M) and Firepower (F) are relative values and will depend on the unit, the terrain it is crossing, its level of depletion, and any enemy fire it encounters.

Range (R) is more exact and does not change. It is given as the number of squares (a square being equal to the size of one unit) a unit can fire, maximum. A unit with a range of 09 can fire at an enemy that is up to nine squares away.

Each of your units (except the Battalion HQ) also has a Strength Bar on the lower edge of the symbol. This Strength Bar indicates the general shape that unit is

in. As it gets shorter, a unit becomes less effective. A unit's strength is only decreased when it takes hits from enemy fire or artillery. To recover some of this lost strength, a unit must remain dug in for a number of turns.

Enemy Forces:
The enemy has armor and artillery units. All of the enemy units start the game hidden and will only appear on the screen if they fire or move. Once they appear, they will remain visible for the remainder of the game, represented on the map by these symbols:

Enemy Infantry Company

Enemy Tank or
Assault Gun Platoon

The enemy also has land mines in place. When your units encounter mines, your units will flash and the message window will inform you that mines have been encountered. Mines do not hurt a unit directly. The most they can do is stop a unit in its tracks. Their main purpose is to disrupt your movement. How often you hit them and how they stop you depends on the level of difficulty selected.

COMMAND PHASE
Object: Order your units to dig in or to become combat ready.

This is the first phase of each turn. The cursor will be a square, white box. In this phase, you can move the cursor around the map with the joystick and scroll the map by taking the cursor to the map edge and holding the stick in the direction you want the map to scroll. The map will no longer scroll when the edge of the map has been reached. If you place the cursor over one of your units and press and hold down the fire button the text area will display the type of unit it is and indicate whether or not the unit is combat ready or digging in. Releasing and then pressing the button again will change this state for that unit.

Digging In:
When you dig a unit in, what you are doing, in effect, is ordering that unit to halt and collect and recover from its disarray. While it remains dug in over a few turns, its Strength Bar will increase toward full strength, simulating scattered forces rejoining their unit while the unit itself is resting.

Units that are dug in will flash in the Command Phase. This flashing will cease, and a dug in unit will take on a background brown color instead of white when the Command Phase is exited. They will flash in the next Command Phase. You have total freedom in digging units in or not in the Command Phase and may do it as often as you wish.

Units that are left dug in will not be able to move or assault for the remainder of the turn. They will be able to fire in the Combat Phase. If a unit that has a noticeable loss of strength is dug in, it remains dug in. This is how you build depleted units back toward full strength, though no unit will be rebuilt to full strength once it has taken some losses.

Units must remain dug in for a complete turn to regain strength. They can remain dug in for an indefinite number of turns, regaining strength for each turn they do so. The rate of recovery a dug in unit will encounter will depend on what difficulty you are in and whether or not that unit has come under fire while it is dug in.

MOVEMENT PHASE
Object: Move your units. Draw enemy fire.

When you have finished with the Command Phase, press the START key. When the cursor turns violet, release the START key. The cursor will then turn black and you will be in the Movement Phase. You may now move all of your units which are not dug in.

To move a unit, place the cursor over it and press the fire button. The cursor will change to a light green, indicating that the unit has been "picked up." You may now move that unit with the joystick. No diagonal moves are allowed. You can only move a unit vertically or horizontally.

When a unit is "picked up," the text area will display the type of unit it is along with its Movement (M), Firepower (F), and Range (R).

Red Cursor Warning:
As you move a unit, or sometimes when you pick up a unit, the cursor will turn red. This is a warning indicator to inform you that the unit has done just about all it can do for the turn, that it has used up all, or almost all, of its Activity Points. Activity Points keep track of how much any one unit can do in a single turn. The red cursor warns you that a unit can not be pushed much farther that turn.

If all of a unit's Activity Points are used, you will see the message "ACTIVITY DEPLETED" appear in the text area when you do try to move it. The cursor will then turn black and the unit will no longer be "picked up."

If a unit is moved until its Activity is depleted, it will not be able to fire in the following Combat Phase. If a unit is moved until it is only partially depleted or until the cursor turns red, it may still fire once in the Combat Phase. A unit that only moves a little, or not at all, may fire twice in the Combat Phase.

Range of Movement:
Each unit is limited as to the number of squares it can be moved in a Movement Phase. Under ideal conditions and across clear, open (not road) terrain, each unit has a starting or base movement allowance:

BASE MOVEMENT ALLOWANCE
Recon Unit   26 squares
Battalion HQ 16
Light Tank   15
Heavy Tank   12
Engineer   9
Artillery   9
Infantry   9

These base values will change as the battle progresses. If a unit loses strength, its base will decrease accordingly.

The base will also not apply if a unit moves over varying terrain types. Units moving through woods, buildings, or crossing streams will not move as far as over clear terrain. Units moving on roads will move farther than on clear terrain. Generally, roads double movement while woods, buildings, and the streams halve it.

Completing a Move:
After you have finished a unit's move for the turn or only for the time being, you may "put it down" by hitting the fire button. The cursor will turn black and you may move another unit or move that unit again, providing it still has Activity Points. You may move all, some, or none of your units in a Movement Phase.

Restrictions to Movement:
There are some restrictions to movement:

Your light and heavy tanks will not be able to enter full woods squares, though they may move on the outskirts of the woods.

Units may not be moved into a square containing another unit, friendly or enemy.

Units may not be moved onto the blown bridges.

Units may not be able to cross a stream on their first try. If a unit fails on its first attempt to cross a stream, you will see the message "UNIT UNABLE TO CROSS STREAM." You may continue trying to cross that unit until it actually does cross or until its activity is depleted. Generally, infantry has the best chance of crossing an unbridged stream and tanks have the worst chances.

You may not move a unit off the map or off the screen. If you reach the screen edge while moving a unit, press the fire button to put it down and then scroll the screen in the desired direction. Then, pick the unit back up with the fire button and continue its move.

Units may stop moving if they encounter mines or if they come under heavy enemy fire. If this happens, the computer will automatically "drop" the unit and the cursor will turn to black.

Enemy Fire:
As you move your units, hidden enemy units may suddenly appear on the map and open fire on your moving unit. It is when this fire is intense enough or accurate enough that your unit may be halted.

When an enemy unit fires (hidden or visible), you will hear a "bang" and see an "F" (for Fire) appear on the screen. The "F" indicates the location of the firing enemy unit. If the unit was hidden, it will appear on the screen after it fires and will no longer be hidden. If nothing else happens after the first "bang," then the shot was a miss. If your unit flashes with an explosion, then that indicates that the shot was a hit and that casualties were taken. You may continue moving a unit that has taken a hit as long as its activity was not depleted by the hit.

COMBAT PHASE
Object: Order Your Units to Fire

When you have finished moving your units, press the START key. The cursor will again turn violet. When it does, release the START key. You will now enter the Combat Phase.

In the Combat Phase, things start hopping. Enemy artillery, originating from miles behind enemy lines and off the map, will start to fall among your forces. You will see the flashes and hear the boom as it hits here and there. This artillery is not particularly devastating to your forces, though it does have some effect on their strength when it hits a unit directly.

In Combat Phase, the cursor will change to a crosshair, allowing you to fire at enemy units.

How to Fire:
To fire a unit, place the crosshair over the unit by moving the joystick and press the fire button. You will either hear a "beep" along with the message "ACTIVITY DEPLETED" appearing in the text area, in which case the unit may not fire, or the cursor will turn white and you will see the unit type and capabilities in the text area. If the latter is the case, then a firing is initiated. Move the crosshair to the target with the joystick. It should twinkle as it is moved, indicating that a shot is being ranged in on a target, press the fire button again. Your unit will then automatically fire at the target. If, when you press the fire button, you hear a "beep" and the message "TARGET AREA IS OUT OF RANGE" appears in the text area, then you must shoot at something closer with that unit as the target is not in its range.

When moving the crosshair through woods or buildings, it may stop moving. This will be accompanied by a "beep" and the message "SIGHTING IS BLOCKED TO THAT AREA." This means that your unit cannot see the firing unit. This will not happen if the firing unit is Artillery.

When one of your units does fire, it will be temporarily replaced by an "F," indicating that it is firing. The target will then explode. However, you will not know for sure if you have hurt the target until you have hit it enough to render it totally ineffective. At that point, it will disappear and the message "UNIT ELIMINATED" will appear in the text area.

Each of your shots has a varying degree of impact on the target depending on the types of units involved, the strength of the units, the terrain the target is in, and the range. Though each shot will appear to hit, not all of them do. Depending on the difficulty level you choose, an enemy unit can sustain from three to twenty hits (not just shots) before it is eliminated.

If you are about to fire a unit and want to change your mind and fire another unit, then place the crosshair (it must be activated and "twinkling") on any friendly unit and press the fire button. You will see the message CURSOR IS ON A FRIENDLY UNIT and the shot will be aborted. You cannot shoot your own units.

ASSAULT ORDER PHASE
Object: Order close in assaults, overruns, bridge reconstruction.

When you have fired all of your units that you wish to fire, push the START key. The cursor will again turn violet. When it does, release the START key. You will now enter the Assault Order Phase. The cursor will change to an arrow and turn red. Enemy artillery will stop failing.

In this phase, you will give orders to your units to assault enemy units that are right next to them. Infantry and Engineers can assault. Tanks can overrun. And Engineers can build blown bridges. If you want to assault or overrun an enemy unit, the unit you want to perform this task must be right next to the enemy unit. You must then give the order to assault or overrun.

To order an assault or overrun, place the arrow over your unit and press and hold the fire button. Then, holding the button down, move the joystick in the direction of the enemy unit to be assaulted or overrun. The arrow will turn light green and point in that direction. Then release the button and go on to other units with which you wish to assault.

If an Engineer unit is right next to a blown bridge, you may order it to try to rebuild that bridge. Place the arrow over the Engineer and, holding the fire button down, move the joystick in the direction of the bridge. The process is identical to assaults.

Engineers may also assault enemy units much like Infantry, with the exception that they will have a more likely chance of dislodging the enemy unit than Infantry has due to their contingent of flamethrowers and demolitions charges.

ASSAULT PHASE
Object: Carry out assault orders.

After you have given all of your orders in the Assault Order Phase, push the START key down. When the cursor turns violet, release it. The cursor will disappear and you will enter the Assault Phase.

Infantry and Engineers that have just received assault orders will attempt to assault their targets. Tanks will attempt to overrun their targets.

Engineers given the orders will attempt to repair bridges. If they succeed, the unit will move onto the bridge. If they fail, they will remain in place and must be given the order to rebuilt the bridge again in the next Assault Order Phase.

Losses:
In assaults and overruns, losses are inflicted and incurred at a greater rate than in normal fire, and noticeable changes in your unit's Strength Bars may appear.

Losses in assaults, unlike losses in normal fire, are taken in full strength losses rather than gradual reductions in strength. What this means is that, in normal fire, a unit may take a few hits before its strength bar begins to shorten. In assaults, any hit taken, either by your assaulting unit or by the defender, is a full step in reduction. Assaults are close fighting and, at the ranges represented, losses are more severe than ranged fire.

Enemy Fire:
After all of your assaults are resolved, the computer, in the interest of fair play, will move any of its units that it has "decided" to move and fire one shot at any of your units that are in range. You will hear these shots, if the screen is not scrolled to the specific area. You will then see the current Victory Level followed by the Save Game prompt in the next area.

Enemy Withdrawal and Counterattack:
After all of your units have assaulted (or immediately after entering the Assault Phase if you have no assaults), the enemy units may move. If this movement is slow (a series of steady "thumps"), then it is simply a unit pulling out of its position to a more readily defended area. If the movement is rapid (a series of fast, descending tones), then this is either the withdrawal of all enemy units toward the final defense of the town, or it is the counterattack. If no units are entering from the top and bottom screen edges, then it is the withdrawal. Otherwise, the counterattack has begun and you best brace your forces for some intense fighting.

ENDGAME

Your Objective—The Town:
The town is your main objective. To win decisively, you must have at least one unit in the town proper by game's end and no enemy units can be east of the final stream and south of the forest above the town. This indicates that the town is secured.

Taking the town is not an easy task. There are sighting problems and, often, the defender will be tough to eliminate. Assaults help, but your main weapon will be your artillery.

Remember, to attain victory you must have at least one unit in the town proper and no enemy units can be east of the final stream and south of the forest above the town. You must maintain this condition against counterattack for two consecutive turns.

Victory Levels:
There are five levels of victory that can be achieved. From worst to best they are:

> Questionable
> Marginal
> Tactical
> Strategic
> Breakthrough

These levels may change during the game as your fates change. You will receive points and your level will rise for eliminating enemy units and building bridges. It will decline as your units are eliminated by the computer's forces. You will also lose a substantial number of points that will generally result in a drop of at least one victory level if you lose your Battalion HQ.

The last turn of the game will affect your final victory rating in additional ways. You will receive points for each of your units occupying the Objective town and you will lose points for each enemy unit in the town. You will also receive a substantial number of points if your Battalion HQ occupies the town at game's end.

The highest level that can be achieved is a Breakthrough in Level 3 with no indications of strength loss on any of your units. A mighty task indeed.

SAVE GAME

At the completion of each "turn" (i.e. at the end of each cycle of the five "phases") you have the option of saving the game-in-progress to computer memory.

When you see the prompt to save the game, you may save it to disk by pressing the SELECT key. This takes you to the save routine. You will see the prompt to hit the SELECT key again to actually save the game. Hitting the START key at this point will get you back to the normal sequence of play.

You can save the game on the game disk or on a new disk. However, if you use a new disk, then do not use that disk for any other purpose. It must be a formatted, blank disk with nothing else on it. The disk save is a sector save and will ignore any files already on the disk. The game will handle the save with no harm to it. Insert the save disk into the drive and hit the SELECT key when prompted. The game will be saved at that turn. After the save, the game will continue.

To enter a previously saved game, load the program as described earlier. When you see the prompt, "HIT OPTION TO ENTER OLD GAME" then insert the disk with the saved game and hit the OPTION key.

When you enter an old game in progress, it will resume play at the difficulty level originally chosen. You cannot change the difficulty level in midgame.

OPERATION WHIRLWIND BATTLE MAP

ROAD   **BUILDING**   **STREAM**   **CLEAR**   **WOODS**   **THE CITY (YOUR OBJECTIVE)**
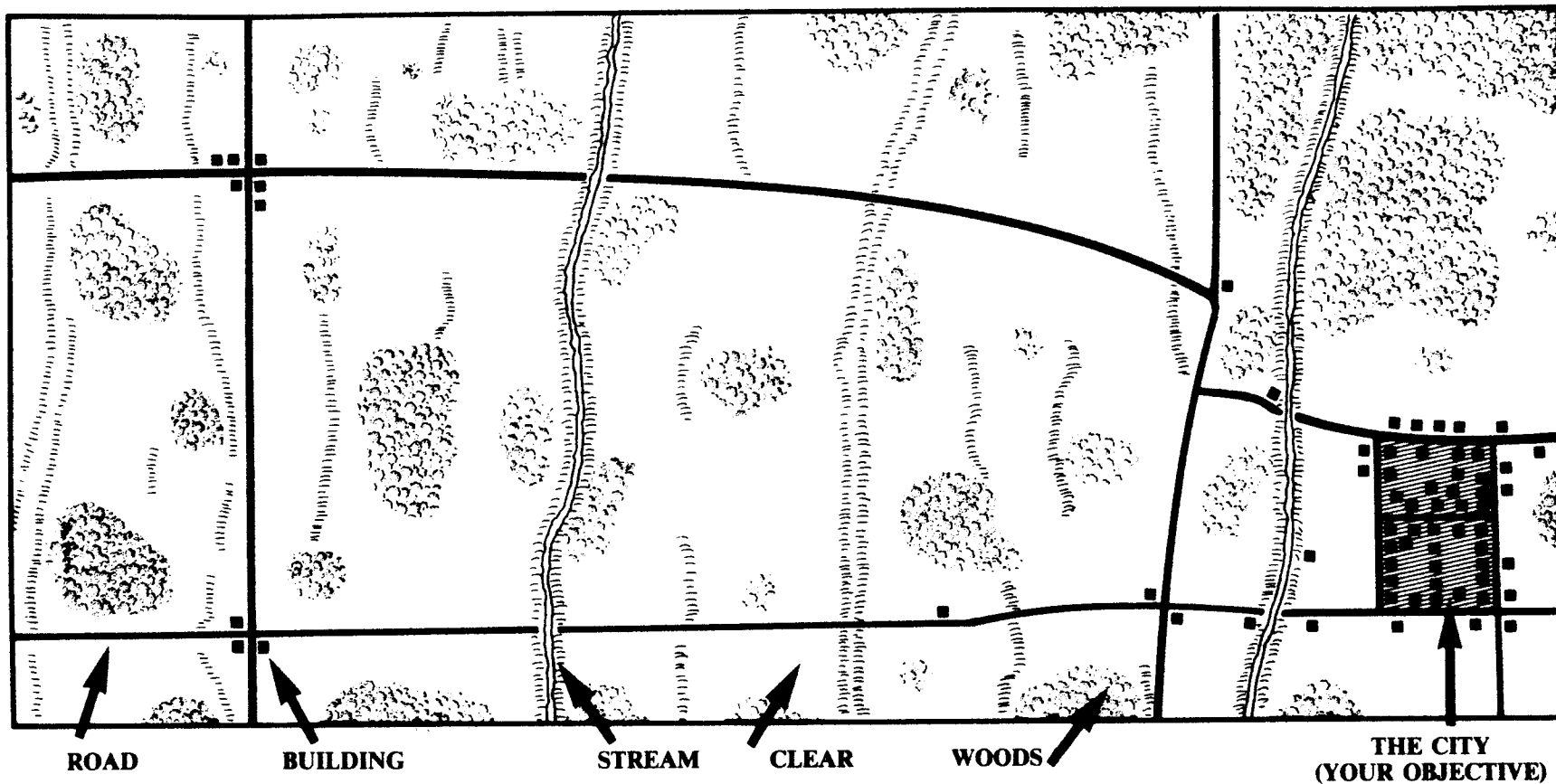
TURN SEQUENCE	THE UNITS	TERRAIN EFFECTS
A. COMMAND PHASE B. MOVEMENT PHASE C. COMBAT PHASE D. ASSAULT ORDER PHASE E. ASSAULT PHASE	BATTALION H.Q. M=F F=M R=09 RECON UNIT M=F F=S R=05 INFANTRY COMPANY M=S F=S R=02 ENGINEER COMPANY M=S F=M R=02 ARTILLERY COMPANY M=M F=H R=40 LIGHT TANK PLATOON M=F F=F R=09 HEAVY TANK PLATOON M=M F=H R=11 ENEMY INFANTRY COMPANY ENEMY TANK OR ASSAULT GUN PLATOON	**TERRAIN** **EFFECTS** CLEAR — Standard terrain type, movement and defense normal WOODS — Movement limited; Defense increased ROAD — Movement increased; Defense normal BUILDING — Movement slowed; Defense increased STREAM — Movement severely limited; Defense increased THE CITY — Movement slowed; Defense increased; Victory points awarded for occupying it.