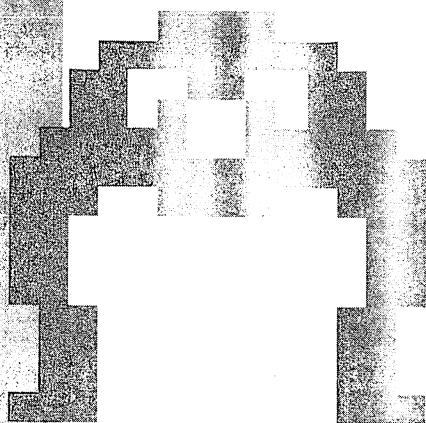
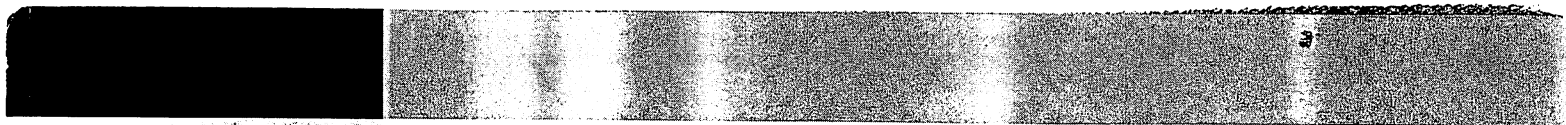


THE HISTORY OF MODEM WARS

As the decades of the twenty-first century passed, football changed. Violence (which had been banned worldwide with the signing of the Global Peace Agreement) found a new and comfortable home on the football field. Pads and helmets evolved into armor and bionics. Penalties for personal fouls were erased from the rulebooks. Knocking out the quarterback (QB) became a method of winning. In response to this trend towards violence, the Global Football League made a radical move and replaced all the players — except for the quarterback — with armed robots and renamed the game to Sport of WAR.

Spectator interest in Sport of WAR exploded. More people came to watch this display of raw aggression than all the other sports combined. The newly-formed Global War League (GWL) invested billions of dollars to make sure these attendance figures remained high. Stadiums were enlarged to house bigger battlefields. "Modi-form" turf made it possible to have terrain that could be changed between battles. Elite QBs received huge salaries to direct the battles from inside hi-tech mobile command centers.

Before long, the GWL funded the development of a home computer version of the game. Called Modem Wars, this game is identical to its parent, except that the plane of play has moved from the stadium to the phone lines. Every detail of the battlefield, every action of the robots, every feature of the QB's comcen have been captured on disk.

Anybody with a home computer and a holophone can experience what only pro QBs have before experienced. If you turn out to be a bad QB, you'll disappear unceremoniously into the phone line or a junction box. If you're good, you may win a place in the Strategists' Hall of Fame in Little Rock. Take it from Ted Aldirt, 2025 Modem Wars' QB of the Year: "All you need is a little concentration, a little dedication, and a lot of desire to pound your opponent into cube steak."

TABLE OF CONTENTS

First, a word about this manual...

It's organized so you don't have to read it cover to cover just to figure out how to play a game. **If you want to cut right to the action**, go to the sections Playing Scrimmage and Playing Full War. Once you're done playing those two scenarios, you can then check out the rest of the manual for information that will enhance your game playing.

1. Your Goal	1
2. Loading the Game	1
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1. YOUR GOAL

2. LOADING THE GAME

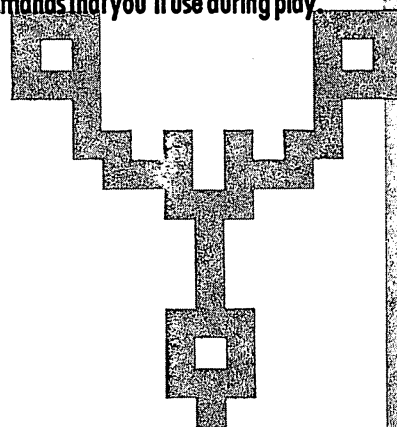
1. YOUR GOAL

...is to win. There are two ways to do this:

- Knock out your opponent's command center (comcen), which is the brains of the operation. No brains, no operation. A comcen is knocked out when its energy level goes to zero as a result of enemy attack. You'll use your robots and comcen weapons to accomplish this.
- Score more points than your opponent before time runs out. There are three ways to score points: Cross the center line with any of your robots; cross your opponent's back line with any of your robots; or hit your opponent's command center (comcen). Time is measured in clicks; 10 clicks equal a minute.

2. LOADING THE GAME

Read the Command Summary Card to find out how to load the game into your computer. The Command Summary Card also lists the keyboard commands that you'll use during play.



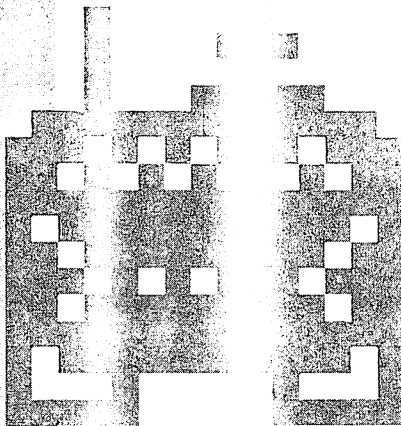
3. PLAYING SCRIMMAGE

3. PLAYING SCRIMMAGE

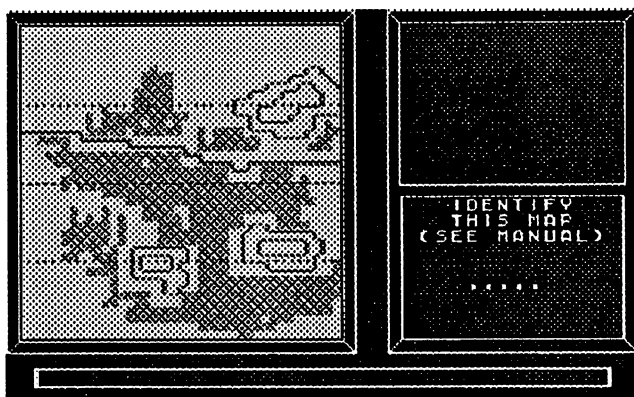
This chapter introduces you to Scrimmage, the ideal scenario for the new QB (quarterback) to try. Based on the popular twentieth century game of NFL football, this was the first scenario developed for Modem Wars by the top QBs.

The walkthrough that follows is a simple presentation of Scrimmage. It's meant to familiarize you with the game. You'll see how Modem Wars is set up, what robots you'll get to use, what the terrain is like, and so on. Don't sweat the details about strategy yet; that will come the more you play. Once you're familiar with the mechanics of the game and you're ready for more in depth play, read the section Getting Into Strategy.

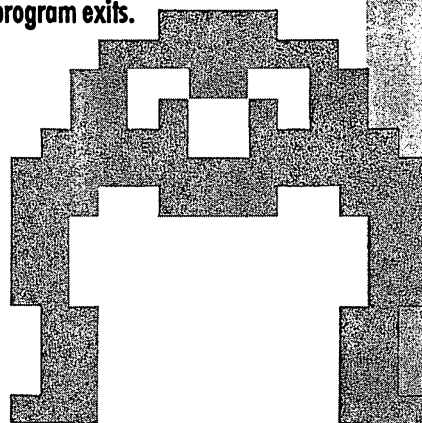
1. Load the game according to the instructions on the Command Summary Card under "Boot Instructions for Solo Play."



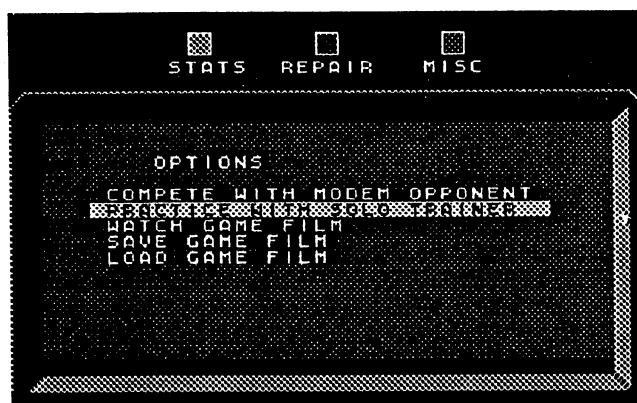
3. PLAYING SCRIMMAGE



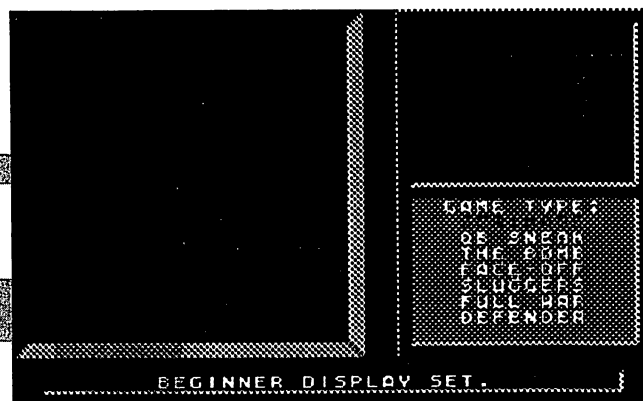
2. Find the map in the manual and type in its name. The maps can be found on pages 16 through 47. For example, the map shown above is named BLITZ (page 19). You have three tries to correctly identify the map before the program exits.



3. PLAYING SCRIMAGE

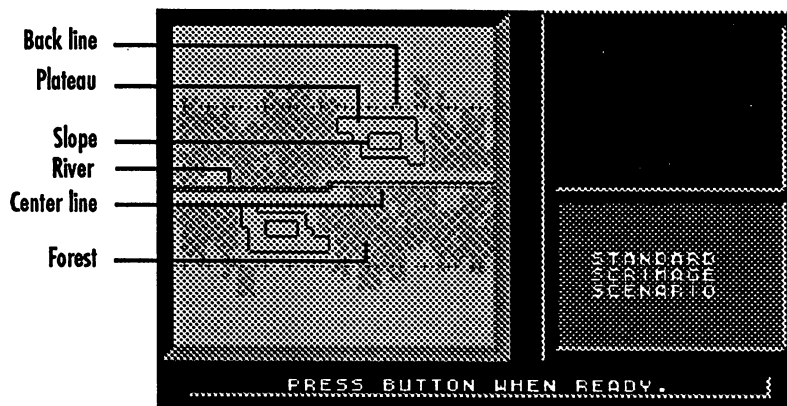


3. Select **PRACTICE WITH SOLO TRAINER** from the Game Options menu.



4. Select **SCRIMAGE** from the Game Type menu.

3. PLAYING SCRIMAGE



5. Press the activate button to start the battle. The size of the playing field is 40 spaces by 40 spaces. A space is the area a robot occupies. Each space can accommodate only one robot at a time and each space can be made up of only one type of terrain. The five types of terrain are:

Plain — Contains no obstacles.

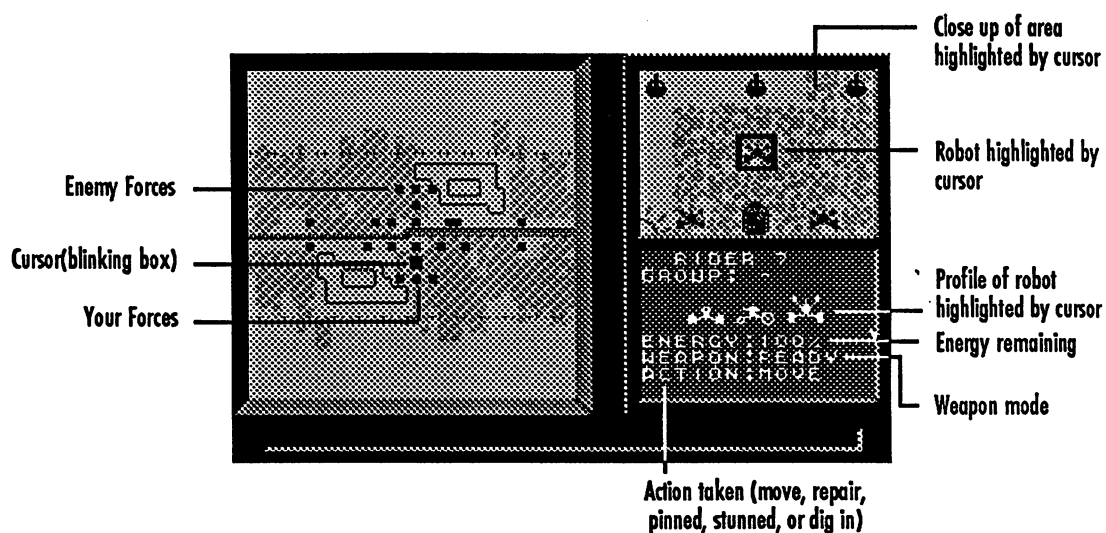
Forest — Slows movement and hides robots. Reduces range of fire in most cases.

Stream — Slows movement. Robots hit while in stream take extra damage.

Slope (lines on the hill) — Angled part of the hill. Slows movement.

Plateau (area in between lines on hill) — Level part of the hill. Gives robots a better view; lets them shoot harder and further.

3. PLAYING SCRIMMAGE



6. Battle begins! Your Battle console shows the entire battlefield. You'll spend most of your time on this console, maneuvering your forces and keeping your eye on the "big picture." Here's a complete list of robots you'll use in Modern Wars. Their availability and head count depends on the scenario you pick. Scrimmage only uses grunts, riders, and a comcen. **NOTE:** You can't make robots shoot; they pick and shoot at the enemy when they're in range.



Grunt — Your basic foot soldier.

3. PLAYING SCRIMAGE



Rider — Your cavalry. They work like grunts, but they're speedier.



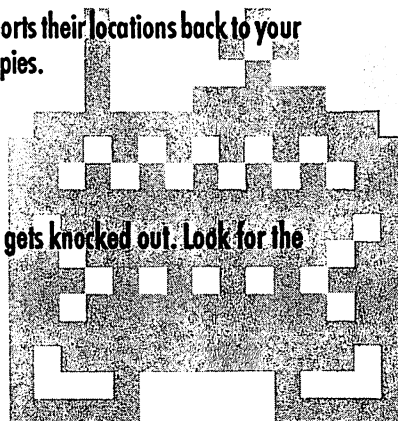
Boomer — Your big guns; slow but strong. Tilted cannons let them fire much farther than grunts and riders can.



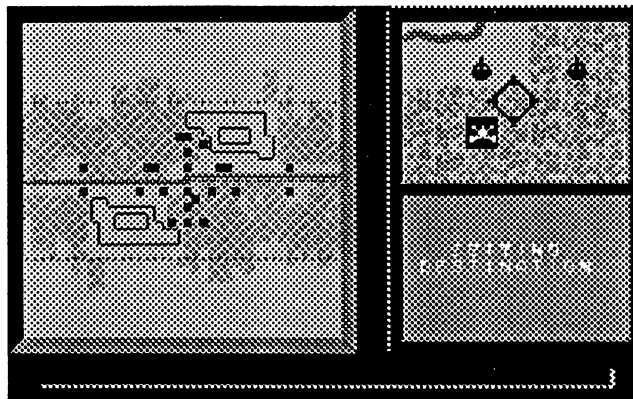
Spy — Your reconnaissance unit. Finds the enemy and reports their locations back to your comcen. Invisible to enemy robots except for the enemy spies.



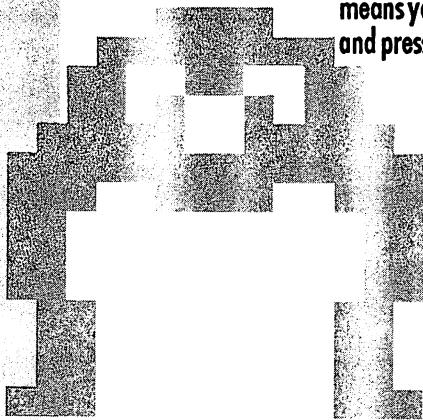
Comcen — Your headquarters. You lose the game if this gets knocked out. Look for the console rattling when your comcen comes under attack.



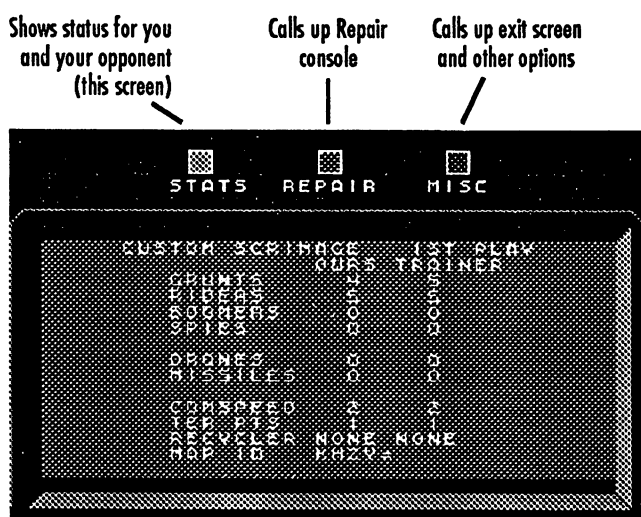
3. PLAYING SCRIMMAGE



7. Move your robots. Put the cursor (the blinking box) on top of the robot and press the activate button. When you move the cursor, you'll see **SETTING DESTINATION**, which means your robot is ready to go to a new location. Position the cursor anywhere on the map and press the activate button to start the robot moving or the space bar to cancel this action.



3. PLAYING SCRIMMAGE



8. Go to the Multi Console to check your resources. Look at the Stats, Repair, or Misc screen, using your joystick or keyboard to toggle between the choices.

Stats — Shows statistics for both players.

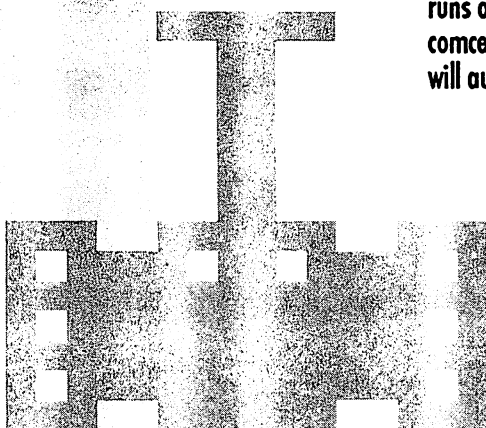
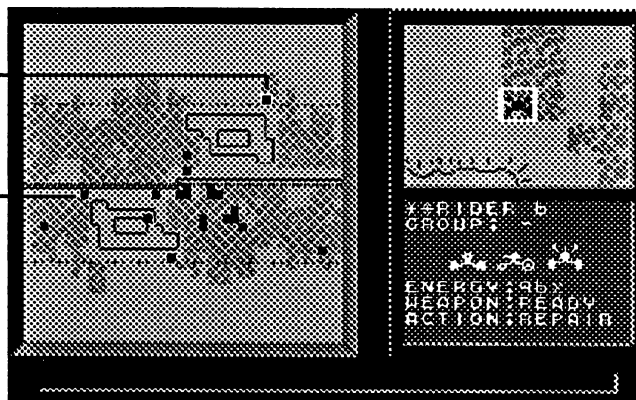
Repair — Shows how much energy your comcen has left. If it runs down to zero, you're knocked out.

Misc — Gives option to end your current game and return to the Game Options menu.

3. PLAYING SCRIMMAGE

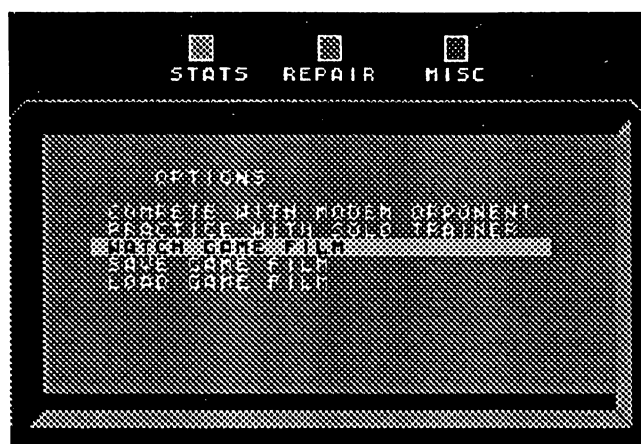
Crossed back line
for terrain points

Keep your comcen
out of danger



9. Go for the win. Get as many of your robots over the enemy's back line before time runs out *and* avoid having your comcen discovered. Or, if you happen to spot the enemy comcen, send your robots after it and knock it out for an immediate victory (your robots will automatically shoot when the enemy is in range).

4. PLAYING FULL WAR

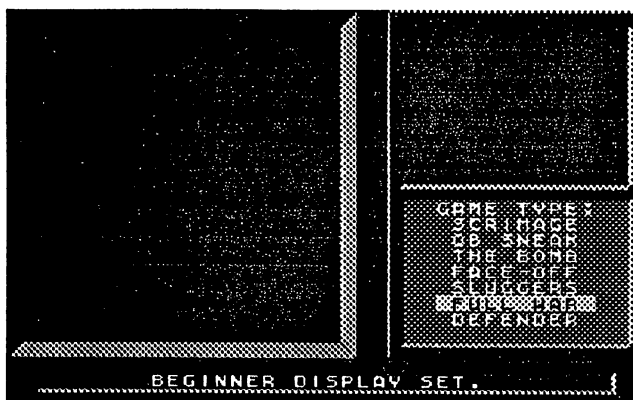


10. Battle over. Hope your debut was a winning one. Go to the Multi console, select MISC with your joystick or keyboard, and then select WATCH GAME FILM to review your game. Go on to the next section, Playing Full War, when you're ready to play Full War.

4. PLAYING FULL WAR

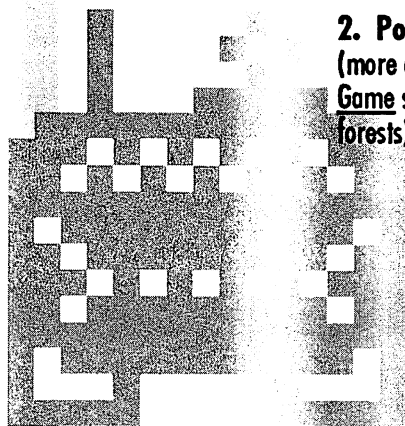
Full War offers you a number of new items and commands to humble your opponent with. Although it's a big jump from a simple game of Scrimmage to the total challenge of Full War, a quick practice round can acquaint you with all the features of Modern Wars. After this round, you can try all the other scenarios.

4. PLAYING FULL WAR

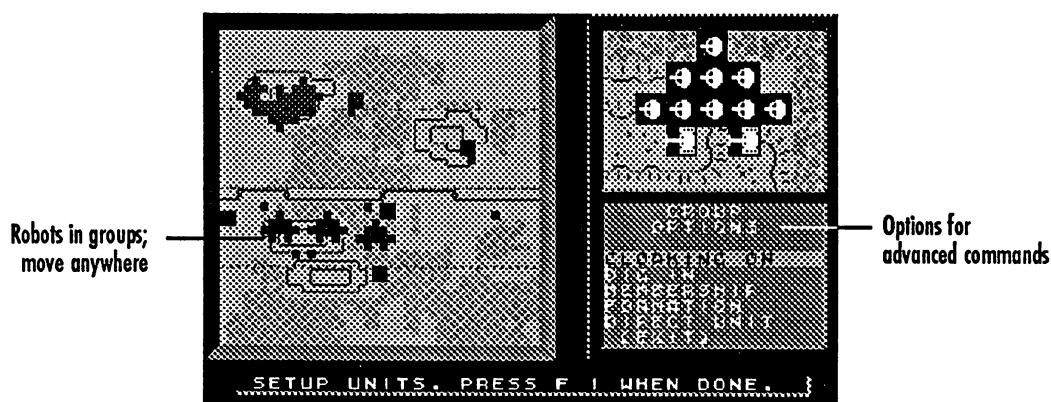


1. Select FULL WAR from the Game Type menu. Press the button when ready.

2. Position your recycler. The recycler sends in replacements for destroyed robots (more on recyclers under "Individual Customization Commands" in the Customizing Your Game section). You must place the recycler on open terrain (not on hills, in water, or in forests) and in your territory.



4. PLAYING FULL WAR



3. Set up your robots before battle begins. Position them anywhere on your territory where you think it'll give you an advantage when the game starts. You'll notice that robots are now in groups. Put the cursor on a robot and press the activate button twice to call up the Group Options menu. You can choose from any of the following commands (see the Advanced Commands section for complete descriptions).

Advanced Commands for Group of Robots

CLOAKING ON — Electronic camouflaging.

DIG IN — Instructs troops to entrench. (Only available when not moving.)

SET BLITZ — Tells troops to move extra fast. (Only available *while your troops are moving* to a destination previously set.)

MEMBERSHIP — Adds or removes a robot from the group.

FORMATION — Changes the positioning of your group.

DIRECT UNIT — Gives a single robot its own command or a separate destination.

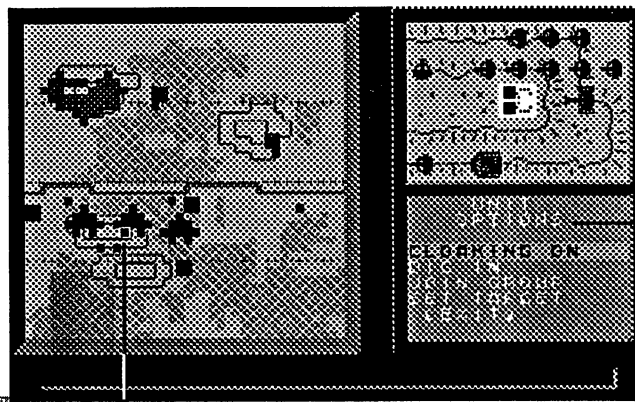
4. PLAYING FULL WAR

Advanced Commands for Individual Robots

CLOAKING ON, DIG IN, and SET BLITZ are the same as above.

JOIN GROUP — Lets the robot join another group.

SET TARGET — Tells an individual boomer which target to shoot at. (Not available if the boomer is in a group.)



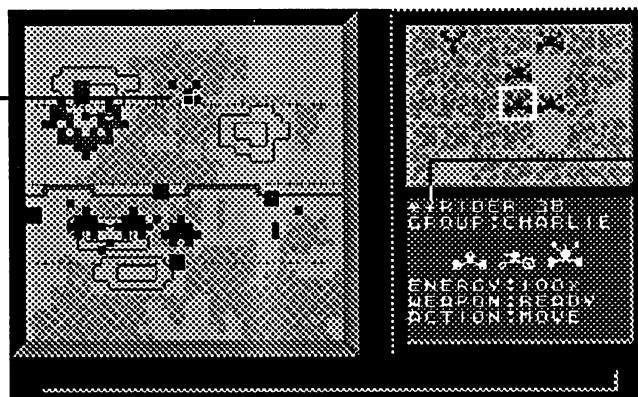
Direct Unit menu (press activate button twice while cursor is on robot)

Cursor in direct unit

4. The battle begins! You can still use the advanced commands listed above any time during the game. A robot automatically picks a target and shoots at that enemy when it's within a designated range (see "Robot Weapon Range" in the Technical Information section for exact ranges). However, you do have some offensive control. You can instruct your boomers to shoot at certain targets (see the "Set Target" command in the Advanced Commands section) and your comcen can now fire drones and missiles.

4. PLAYING FULL WAR

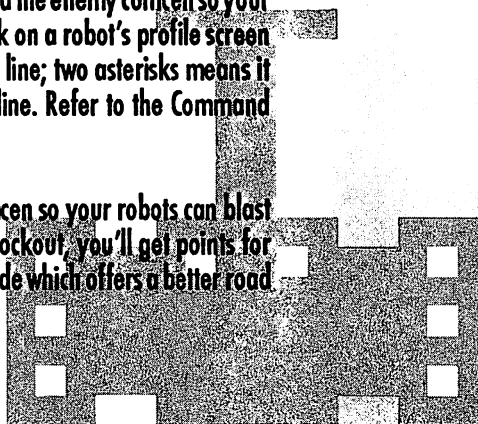
Group goes for terrain points



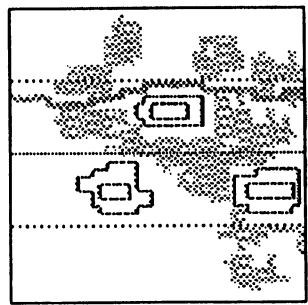
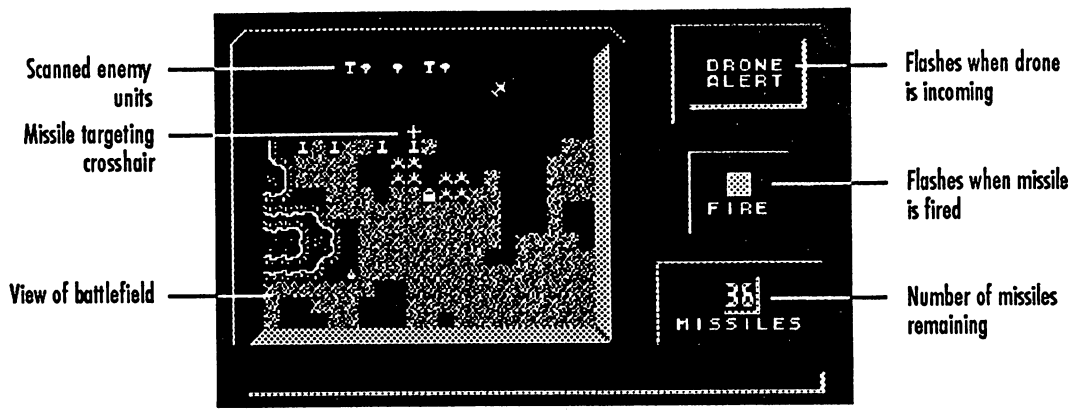
Double asterisk for robot crossing back line

5. Develop your strategy. Cross your robots over the center line and the enemy's back line to earn as many terrain points as possible or try to surround the enemy comcen so your robots can blast away at it and score a knockout. One asterisk on a robot's profile screen means the robot has earned its points for crossing the center line; two asterisks means it has earned points for crossing the center line and the back line. Refer to the Command Summary Card for the key that calls up the scores.

If you want to go for the knockout, surround the enemy comcen so your robots can blast away faster than he can repair. Even if you don't score a knockout, you'll get points for hitting the enemy comcen. As the game develops, you can decide which offers a better road to success.



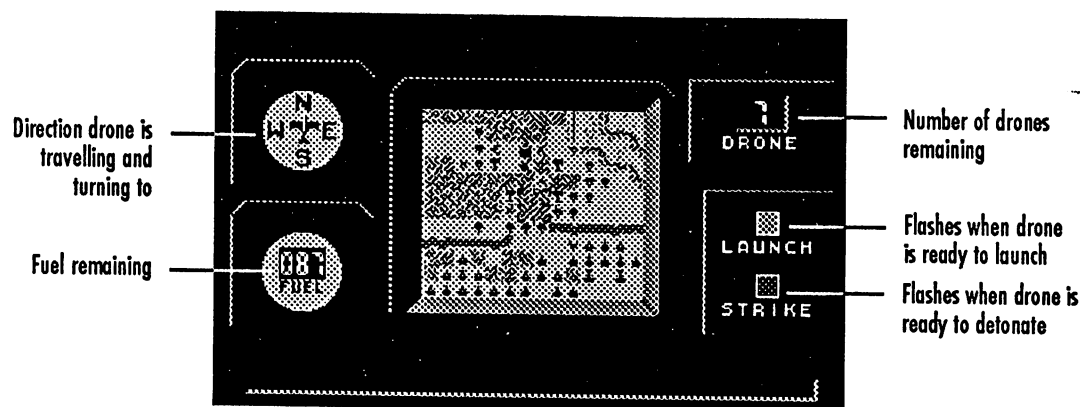
4. PLAYING FULL WAR



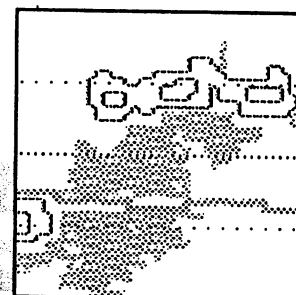
ANNIE

6. Go to the Radar console. Use the Radar console to scout the area around your comcen, make an offensive attack with missiles, or shoot down an opponent's drone with missiles. To shoot a missile, line up the crosshair on your target and press the activate button. The main window of the Radar console is a scan area (17 x 21 spaces) updated once a second. As the scan bar cycles through the display area surrounding your comcen, your robots and the background terrain show brightly as the scan passes over them and then fade to black once the scan has passed. Enemy robots that your units have sighted "persist"; that is, they won't fade after a scan (see "Robot Sighting" in the Technical Information section for more details on sighting enemy robots). Enemy robots that your units haven't spotted won't persist; they will appear as flickering figures in the background terrain. Using this console to see if there's a spy snooping in your comcen's neighborhood.

4. PLAYING FULL WAR

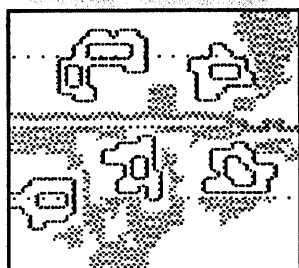
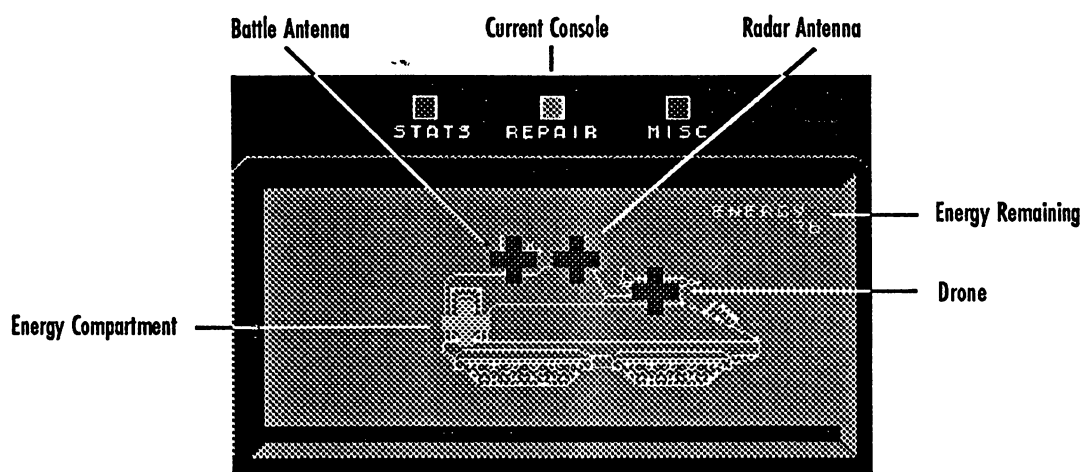


7. Go to the Drone console. Drones are your main offensive air power. Press the activate button; the drone will launch and the console window (11 x 13 spaces) will fill with the drone's infrared camera view of the battlefield below the drone (as with radar, your robots and spotted enemy robots show clearly, while unseen enemy robots appear as flickering figures). When you press the activate button again to detonate the drone, the drone moves one more step and then dives down to explode over an area of four spaces. Any robots in the target area are stunned — they can't move, shoot, or repair for 15 clicks and lose half their energy (except comcons, who lose 24 percent of their energy). Once you launch a drone, you can't exit this console until the drone is detonated or runs out of fuel (it starts with 100 units). At 20 units of fuel, your fuel monitor will flash to warn you of the critical fuel situation.



AZJ*V

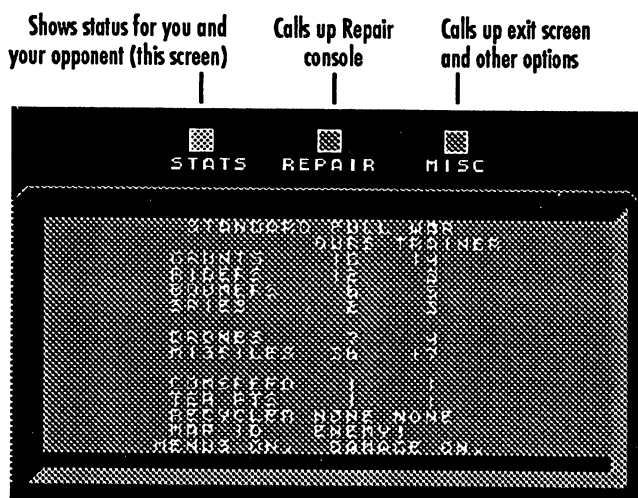
4. PLAYING FULL WAR



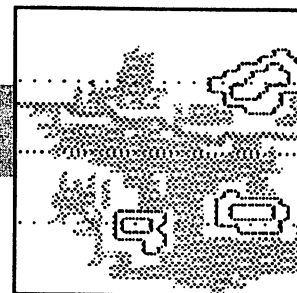
BIDWD

8. Go to the Multi console to perform any necessary repairs. If you've received any damage, you'll get the Repair screen instead of the Stats screen. Press the activate button and you'll see the parts of the comcen that you can repair. Use your joystick or keyboard to highlight the section of the comcen you want to repair and press the activate button. You'll hear a sound — much like an engine trying to turn over — which means it's attempting to repair. When the sound stops, press again. Repeat this process until you've fixed it or until you're tired of trying and want to move on to other QB business. The comcen can't repair and move at the same time, so prepare to come to a dead halt when you have to repair. If you're stunned, you have to overcome the stun before you can repair. To do this, keep pressing the activate button.

4. PLAYING FULL WAR

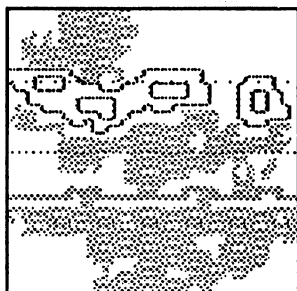
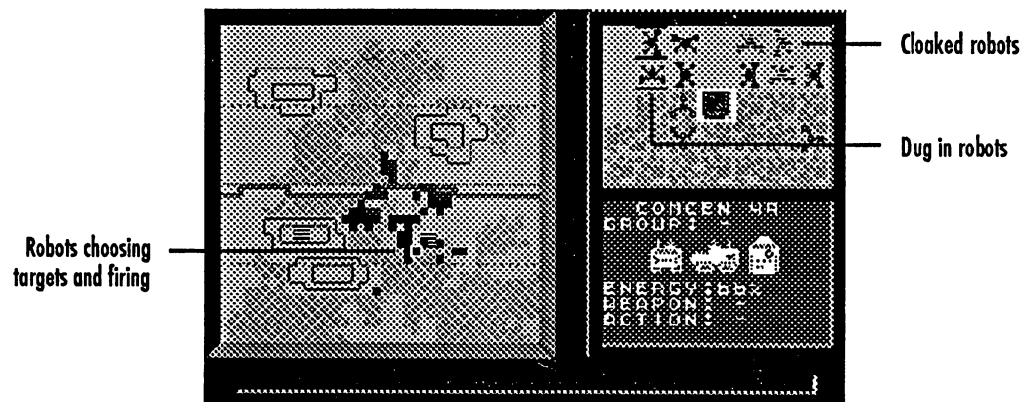


9. Check the Stats screen. You'll see a comparison between you and the Solo Trainer on soldiers, drones, and missiles remaining, your comcen speeds, terrain points you get for each robot crossing the center line (except for the comcen which earns more (see "Terrain Points" in the Technical Information section for exact amounts), your recycler settings (more on recyclers in the Customizing Your Game section), and the map's ID (this falls in the column of the player who chose the map and game; in this case it's you).



BLITZ

4. PLAYING FULL WAR



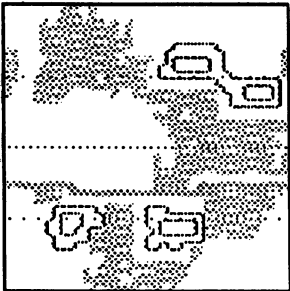
BNIKH

10. Return to the Battle console. Move, dig in, blitz, cloak — do whatever it takes to win. Go for the crushing attack or rack up your terrain points while keeping the enemy at bay.

5. GAME SCENARIOS



11. Game's over. Go to the Multi console and select the Misc screen. Select WATCH GAME FILM to review your game. While you're watching the game film, you can choose to view just your moves, just your opponent's moves, or both your moves. See your Command Summary Card for the key that lets you toggle between these three viewing options. You can set the speed of the replay by pressing a number from 1 (slow) to 9 (fast). If you want to save the game, select SAVE GAME FILM, enter a name up to 16 characters, and press the activate button.

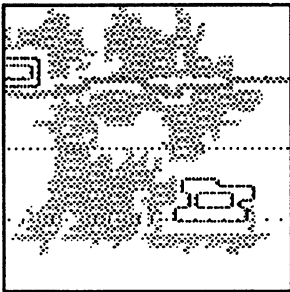


5. GAME SCENARIOS

Scrimmage and Full War are only two of seven scenarios. Here's the rest of them. The scenarios become progressively more challenging as you move down this list.

CDINO

5. GAME SCENARIOS



DAVID

Scrimmage

Players	Each side gets 5 riders, 5 grunts, and 1 comcen (speed 2).
Time Limit	63 clicks
Setup	No setup time; game starts immediately.
Damage	No comcen systems can be damaged; no comcen repair possible.
The Game	The sweet and simple scrimmage. Go for your terrain points and then try to attack their comcen if you've got time and energy.

QB Sneak

Players	The quarterback has 3 riders and 1 comcen (speed 3) with 8 missiles. The defense player gets 5 riders, 5 grunts, and 1 comcen (speed 2) with 8 missiles. Defense gets no terrain points, but gets a 20 point lead. Whoever picks the game is the quarterback; the roles will alternate if you play another game of QB Sneak.
Time Limit	63 clicks
Setup	Both players must end setup to start the game.
Damage	No comcen systems can be damaged; no comcen repair possible.
The Game	In QB sneak, the QB should try to avoid opposing riders and collect his or her terrain points with daring end runs. The defense should scour the map, looking to sack the QB's comcen while avoiding sneak attacks on his or her own comcen.

The Bomb

Players	Each side gets 1 comcen (speed 2) with 4 drones and 12 missiles.
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5. GAME SCENARIOS

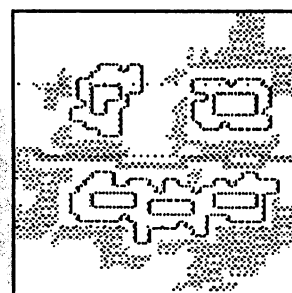
Setup No setup time; game starts immediately.
Damage No comcen systems can be damaged; no comcen repair possible.
The Game The Bomb offers prime training ground for your air combat game. Practice controlling your drones and missiles as you try to knock out the opponent's comcen.

Face-Off

Players Each side gets 28 riders, 3 spies, and 1 comcen (speed 2). Each comcen gets 3 drones and 12 missiles.
Time Limit 127 clicks
Setup Either player can end setup. GWL has a "quick pitch rule" which states that you do not have to wait for the other QB to be ready in order to start the game. If you're a QB who's fast on the setup, you can start the game while your opponent is still scratching his head over where to put his robots.
Damage Comcen systems can be damaged; comcen repair is possible.
The Game Here's an excellent exercise in lightning warfare. Devoid of the slower grunts and boomers, this rider-intensive game lets you practice the fast attack.

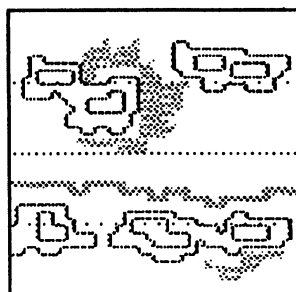
Sluggers

Players Each side gets 12 riders, 12 grunts, 4 boomers, 3 spies, and 1 comcen (speed 2). Each comcen gets 3 drones and 12 missiles.
Time Limit 127 clicks
Setup Either player can end setup.



DYLAN

5. GAME SCENARIOS



E/PTP

Damage The Game

Comcen systems can be damaged; comcen repair is possible. Sluggers adds a new dimension to warfare with boomers, your heavy artillery unit. As the name suggests, you can expect to slug it out in this one. This scenario uses all the robot types.

Full War

Players

Each side gets 28 grunts, 12 riders, 6 boomers, 3 spies, and 1 comcen (speed 1). Each comcen has 5 drones and 20 missiles.

Time Limit

254 clicks

Setup

Either player can end setup.

Damage The Game

Comcen systems can be damaged; comcen repair is possible. Full War is full war. It's the game that the pros play. You can move your robots as groups or individuals and you get new advanced commands like cloaking, blitzing, and digging in. You'll also get to recycle robots, so as they're scrunched, new ones come in to take their place. Be sure to eat a big breakfast because at 254 clicks, this could be your longest battle.

Defender

Players

Each side gets 28 grunts, 12 riders, 6 boomers, 3 spies, and 1 comcen. The attacker's comcen travels at speed 1 while the defender's comcen (player who picked the map) can't move. The defender gets 2 drones, 20 missiles, and a 200 point lead, but gets no terrain points and no

6. QUESTIONS AND ANSWERS

Time Limit
Setup
Damage
The Game

robots recycled. The attacker gets 5 drones, 8 missiles, standard terrain points and robot recycling. Whoever picks the map is the defender; the roles will alternate if you play another game of Defender.

254 clicks

Setup is over whenever the defender starts the game.

Comcen systems can be damaged; comcen repair is possible.

As the defender, you have to protect your comcen and bide your time, a task that's harder than it seems. You can take the offensive, but that's a risky proposition you can only consider as the game develops. As the attacker, you'll want to rack up points or knock out the opponent's comcen. As in Full War, you can move your robots as groups or as individuals and you get all the advanced commands.

6. QUESTIONS & ANSWERS

This section contains answers to questions that you may ask about the various consoles.

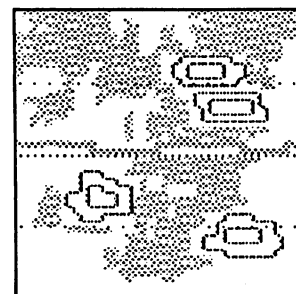
Battle Console

How do I remember where I told my robots to go?

If you've forgotten where you ordered a robot to move, put your cursor on top of that robot. The grey box emanating from the robot shows the path the robot will follow to the destination you've set. If it has no box, it has no destination.

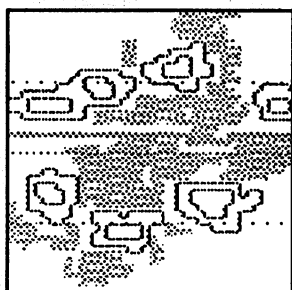
Why can't I see my opponent's robots on the Battle console?

They're too far away. You can only see the enemy robots when they're within a certain range of your robots (the exact ranges are listed under "Robot Sighting" in the



ENEMY

6. QUESTIONS AND ANSWERS



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Technical Information section) or when they're firing on you. And remember that during set up, you just plain don't get to see your opponent's forces.

Standard Display shows on the screen your forces and those enemy robots which your troops have spotted; this is the default setting. Whenever you practice with the Solo Trainer, you can choose between STANDARD DISPLAY or BEGINNER DISPLAY. Beginner Display shows your forces *and* the Solo Trainer's forces on the screen, which is nice if you want to see every step your computer opponent takes. When you play against a modem opponent, you only get the Standard Display.

Why can't I see any robots on the Battle console?

Your battle map was damaged during battle. Go to the Multi console and then select REPAIR to try to fix it. Or, you can use the magnified window to view the battlefield.

How do I make my robots shoot?

You can't. Robots pick their own enemy targets to shoot at. The two exceptions are: 1) You can select a target for an individual boomer in Full War and Defender (see "Set Target" in the Advanced Commands section). 2) In most of the scenarios, your comcen can shoot missiles and drones.

Radar Console

Why are there no missiles?

You're either playing Scrimmage, a scenario that doesn't have missiles or else you used them all up. Check your Radar console or Stats screen to see how many you have left.

Why won't the missile fire when I tell it to?

The Radar unit in your comcen was hit. You have three choices: 1) Go to the Multi console

6. QUESTIONS AND ANSWERS

and then select REPAIR to try to fix it. 2) Keep trying to fire; sometimes all it takes a couple of tries and a little luck. 3) If your comcen is cloaked (a feature normally available only in Full War and Defender), the Radar console is completely inoperable; you'll have to uncloak.

Why is the radar console malfunctioning?

Same reasons as above.

Why am I missing the enemy drone?

Since there's a lag time between when you fire the missile and when it reaches its destination and explodes, you'll have to lead the moving target a little. The Bomb is a great training scenario for learning how to use missiles. It takes a little practice to guide one, so don't be surprised if nobody calls you "Ace" for a while.

Drone Console

Why are there no drones?

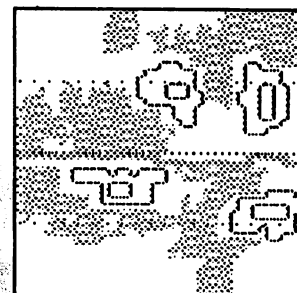
You're either playing Scrimmage or QB Sneak, scenarios that don't have drones, or you used them all. Check your Drone console or Stats screen to see how many you have left.

Why won't the drone launch when I tell it to?

The drone unit in your comcen was hit. You have two choices: 1) Select REPAIR to try to fix it. 2) Keep trying to launch the drone; persistence may pay off. 3) If your comcen is cloaked (a feature normally available only in Full War and Defender) the Drone console is completely inoperable; you'll have to uncloak.

Why is the drone console malfunctioning?

Same reasons as above.



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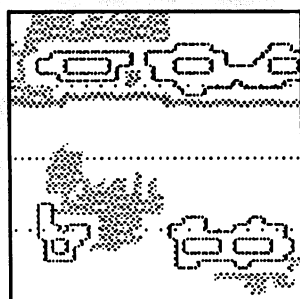
6. QUESTIONS AND ANSWERS

Why is it so hard to control a drone?

When you push the control stick in any direction, you're telling the drone to make that its new heading. If that heading happens to be in the opposite direction it's now flying, the drone will have to sweep 180 degrees (a bit of a task since drones don't cut back and forth like kites). For best control, use the compass to check the drone's current direction and make small turns rather than wide arcs.

What's the drawback to launching a drone?

There's a small price to pay for launching a drone. When you launch a drone, your comcen becomes visible on the enemy's Radar Screen for several clicks. This gives your opponent the chance to find you and nail you.



H+DOG

Repair Console

Why doesn't the repair option work?

The more damage you suffer, the worse things look for a successful and speedy repair. There's no guarantee that this will work, but, for all its time-consuming inconvenience, many a QB has rued the day when he chose not to attempt repairs.

What's energy about?

Energy is your comcen's life blood. Once the comcen is completely drained of energy, it won't even have the strength to spit out a white flag. Keep an eye on your energy and recharge it if you're getting low. And be sure to do it before you wind up just "bailing water," a situation where you're repairing as fast as the enemy keeps pouring it on.

Why is the repair screen all red?

Your comcen is stunned when this screen goes red. During the stun, two things happen:

1) You can't move; it's paralysis for 15 clicks. You can still use this down time to examine the battlefield or give orders to your robots. 2) Your systems become faulty. You can attempt to overcome the stun by repeatedly pressing the activate button. Clearing the stun is vital if your comcen needs to run away or repair other systems.

7. ADVANCED COMMANDS

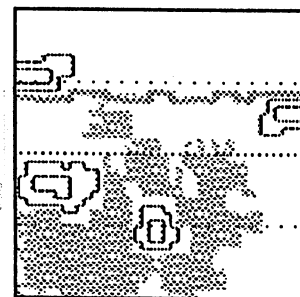
The Advanced Commands listed below are available in Full War and Defender.

Advanced Commands for Groups of Robots

CLOAKING ON — Cloaking is electronic camouflaging. Cloaked robots cannot see or shoot. Normal robots see cloaked robots from 2 spaces away, while spies can see them 3 spaces away. A cloaked comcen can't use the Radar and Drone consoles and can give no orders until it uncloaks.

DIG IN — Digging in gives you both a defensive and offensive advantage. If the shooter is dug in, two points are added to the damage inflicted on the target. If the target is dug in, the damage it receives is reduced by one quarter, but only for basic- and blitz-type damage. You can't dig in while under enemy fire or when your group is moving. To move again you have to dig out, which takes a click to do.

SET BLITZ — This option is only available *while your troops are moving* to a destination previously set. On the up side of having your robots blitz, they move at spy speed and add 15 extra points to any damage they inflict (except for boomers, which add 5). On the down side, they lose energy for moving faster and it costs them one and a half times the amount of energy for each extra point of damage they inflict. A robot that causes 15 points of extra damage pays 22 points itself. Although they can blitz themselves to



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7. ADVANCED COMMANDS

zero energy, robots survive until they're hit by enemy fire, missiles, or drones. Your robots can't cloak and blitz at the same time.

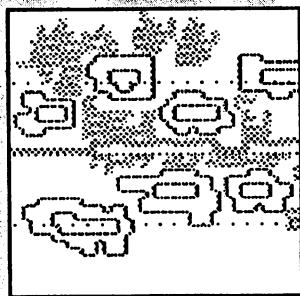
MEMBERSHIP — This adds or removes a robot from the group. Select **MEMBERSHIP** and you'll see **SETTING MEMBERSHIP** and then the robot's profile. Click to remove or add. If you remove a robot from a group, it becomes an individual (See "Advanced Commands for Individual Robots," below, for its new commands). When you're done, move the cursor to a neutral area (any spot where there isn't a robot) and click the activate button or press the space bar. The comcen can never be part of a group.

FORMATION — Formation lets you quickly change the direction of your group. The highlighted robot is the point on which the group pivots. **SWEEP LEFT** rotates your group 90 degrees left. **SWEEP RIGHT** rotates your group 90 degrees to the right. **Reverse** turns the group 180 degrees. **CUSTOM** lets you position individual robots anywhere. When you're done, move the cursor to a neutral area (any spot where there isn't a robot) and click or press the space bar.

DIRECT UNIT — Use this to give a single robot its own command or a separate destination. When you select this option, you'll see the unit cursor. If you move the cursor and give the robot a destination, it will resign from the group and move there. If you press the activate button without moving the cursor, you will get the Unit Options menu for that robot (see below). A robot can execute any command except for **JOIN GROUP** and still remain a part of that group. For instance, in a group of cloaked robots, you can tell one robot to uncloak and be the "look out."

Advanced Commands for Individual Robots

An individual robot can choose from **CLOAKING ON**, **DIG IN** (or **SET BLITZ**), **JOIN GROUP**,



HEART

8. CUSTOMIZING YOUR GAME

and SET TARGET (for boomers only). The first three choices are covered above.

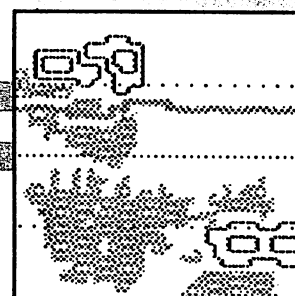
JOIN GROUP — If you choose JOIN GROUP, you're shown a list of all the groups; select the one you want it to join. If a group is too far away, the robot can't join it. Note that the robot doesn't physically join up with the new group; it adopts whatever movement the group is performing and accepts all commands from its new group. The comcen can never be part of a group. Groups cannot be spread over more than 10 spaces.

SET TARGET — This option lets you tell an individual boomer which target within range to shoot at. When you select this option, you're given a cursor whose movement is limited to the current range of that boomer (including bonus for hills). Press the activate button when the cursor is on an enemy unit to set that as the target. As long as that robot is visible and within range, the boomer will continue to fire exclusively at it. (Note: You never need to set the enemy comcen as the target; any robot who can shoot at it always will.) Select CLEAR TARGET to let a boomer return to picking its own targets.

8. CUSTOMIZING YOUR GAME

Feeling your oats as a commander and ready to play a game on *your* terms? There's a lot you can customize in Modern Wars, from map type to robot speed to handicap points. Here's what you do to customize:

1. Toggle the customization option on by pressing the wildcard key when you see the Game Type menu on the screen (see the Command Summary Card for the wildcard key). If you change your mind about customizing, press the wildcard key again to toggle it off.
2. Pick the scenario you want to play.



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8. CUSTOMIZING YOUR GAME

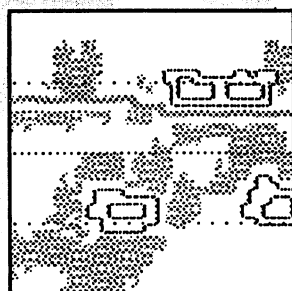
3. Set the custom settings described under "Global Customization Commands," below. *Only one of you can set these commands* — the honor goes to whoever pressed the space bar first when you connected your computers (this option alternates; whoever doesn't set the commands this time gets to do it next time). The settings will be *the same* for both you and your opponent.
4. Set the custom settings described under the "Individual Customization Commands," below. *Both you and your opponent can set these commands* and they don't have to be the same. To check the values that you've both set, go to the Multi console and look at the Stats screen.

Global Customization Commands

UNIT MENUS — When Unit Menus are on, you get to choose from the wide variety of advanced commands like cloaking, blitzing, and digging in; when they're off, you can't. You get a much simpler game when you turn the Unit Menus off.

DAMAGE — You can choose to have the comcen systems subject to damage or immune to it. If you choose on, a drone hit will disable all of your systems and enemy robot hits have a chance of damaging any of the systems. However, you can still attempt to repair. If damage is off, the comcen cannot restore its energy nor can it repair.

MAP TYPE — If you choose standard, the computer will generate a random map and give it a name. If you choose custom, you can choose from RANDOM (which generates an asymmetrical random map) or SYM/RND (which generates a symmetrical random map). The computer assigns the map a name. Press the activate button to accept the map.



HMMU+

8. CUSTOMIZING YOUR GAME

Another way of generating an asymmetrical random map is to type in any five-letter name; the computer will generate a map for that name. Another way of generating a symmetrical random map is to type in any four-letter name and an equal sign (for example: PUTT=). All map names ending with the equal sign (=) are symmetrical maps. Press the activate button to accept the map.

If you use an asymmetrical map, you should play with the map twice so each player gets to play each side of the map (see the onscreen command that lets you do this). If you use a symmetrical map, you only need to play it once since each player faces an identical battlefield.

Individual Customization Commands

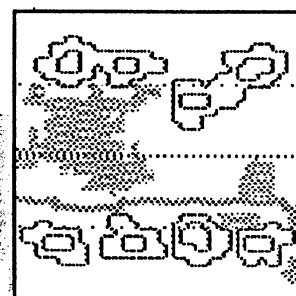
CUSTOM /STANDARD SCENARIO — You can now play the game with the setup you've designed so far, or you can further customize it (the Solo Trainer never customizes; it always chooses the standard settings).

COMCEN SPEED — Choose 0 (no movement), 1 (grunt speed), 2 (rider speed), or 3 (spy speed).

TERRAIN POINTS — Choose 0 (no points); 1 (robot crossing center line = 1 point, back line = 2; comcen crossing center line = 16 points, back line = 32); or 2 (double the values of setting 1). Robots can only collect points for crossing each line once. Asterisk(s) in the upper left of the status window of each robot tell what points a robot has collected: one asterisk for the center line, two for the back line.

DRONES — Choose from 0 to 9 drones.

MISSILES — Choose from 0 to 36 missiles. The GWL handbook recommends that you have 4 missiles for every enemy drone.

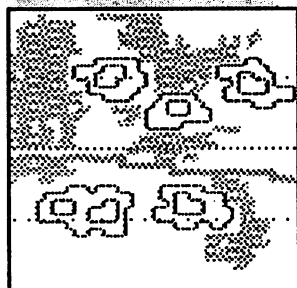


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9. CALLING UP A MODEM OPPONENT

RECYCLER — A recycler is the location where replacement robots arrive on the battlefield according to the rate you select. You can choose from **NONE** (no replacements), **HALF** (one replacement for every two of the same type eliminated on the field of play), or **FULL** (one replacement for every robot eliminated). If you choose to recycle, you're asked to pick a place where you want your replacement robots to come in. You can choose any spot, as long as it's on open terrain (not on hills, in water, or in forests) and on your side of the battlefield.

HANDICAP — There are two types of handicaps: point lead or robot advantage. You can give your opponent a point lead from 0 to 500. You can also give the other player a robot advantage by removing as many of your robots as you want. (This option is available whether you're playing a standard or custom scenario.) To do this, press the wildcard key to toggle **DESTROY ON** during robot setup (press it again if you change your mind). Put the cursor on a robot or — if you're so bold — a group of robots and press the activate button. The robot or robot group is instantly vacuumed off the field by the Hoovomax machine. (The only robot you can't get rid of is the comcen.)



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9. CALLING UP A MODEM OPPONENT

You can play against anybody who owns a modem and Modem Wars. If you belong to a computer bulletin board service, find out who else is looking for an opponent, or offer yourself as one. Once you find a challenger, use the Command Summary Card for directions on how to connect with a modem opponent. The player who presses his or her space bar first gets to select the game type and pick the map.

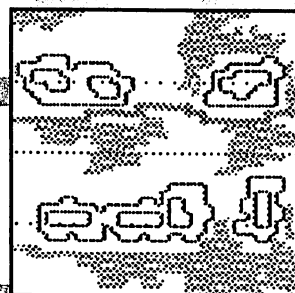
9. CALLING UP A MODEM OPPONENT

When you're playing a modem opponent, you get the VOICE/PAUSE option on the Misc screen. This lets you pick up the phone and talk with your opponent. During your conversation, the game will pause.

For rewarding challenges (in other words, games where nobody gets skunked), find an opponent whose skills are equal to yours. How do you compare skill levels? By comparing your batting averages. Keep track of the points you earn for each game you play — win, lose, or draw — and the number of games you play. Divide the total points by the number of games you've played and you'll get your batting average. Here's the points you get: winner by knockout = 500; winner by terrain points = number of terrain points earned divided by two and added to 300; loser by knockout = 150; loser by terrain points = 200; draw = 250. An average player's batting average is about .300, while a good player's is about .375. If you can't find an opponent whose skills are equal to yours, the less experienced QB can take a point lead or have a robot advantage. See "Handicap" in the Customizing Your Game section for more details.

Messages to Your Enemy

To send a message anytime you're connected to a modem opponent, press <RETURN>, type your message, and then press <RETURN> again to end transmission. There are no rules of etiquette when it comes to using the message ticker board. Some QBs, like Gaff Winston (GWL Rookie of the Year, 2024), were gracious players who always sent a congratulatory message to the winner and a message of encouragement to the loser. Others, like T.C. Steeple (Most Offensive QB, 2023) peppered his game with remarks like "Is that your diaper I smell?", "Even my dog wouldn't do that" and "That's a maggot move if ever there was one!"



10. GETTING INTO STRATEGY

10. GETTING INTO STRATEGY

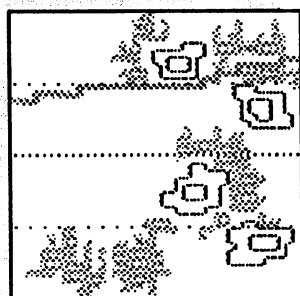
Now that you've got the fundamentals down of directing your forces and using your various QB consoles, and now that you've seen the advanced commands, it's time for you to get into strategy. It's time your troops quit romping up and down the battlefield like it's Sunday in the park; you're not a plebe anymore.

Strategy is the skill line that all the greatest QBs have crossed. Rommel Smith developed a knack for great strategic moves and for that he had a whole trunk at the local phone exchange dedicated to him. General Rutger Wheatbacker, on the other hand, never got the hang of it and ended up running a banana plantation in the Micronesian Islands (and poorly, too).

Training Films

The GWL has selected six replays for you to study, four of which are detailed below. Select **LOAD GAME FILM** and you'll be prompted to insert a data disk. Insert the Master Game Disk (that's the original disk, not the copy you've been playing with). Press the activate button, highlight the replay you want to see and then select **WATCH GAME FILM**. The game film descriptions below break up the battles into clicks so you can match the descriptions with the action on the screen. You can do any of the following during the replay:

- Set the speed of the replay from 1 (slow) to 9 (fast) using the number keys.
- Pause the action any time using the Time Out key (see your Command Summary Card for this key).
- Select the Battle Display mode to get three different viewpoints of the battle: what you saw, what your opponent saw, and a combination of both (see your Command Summary Card for this key).



JAGER

10. GETTING INTO STRATEGY

Scrimmage

Blue: Robby Tartar; .377 batting average; Global War League Rookie of the Year, 2025; Comcen News Player of the Year, 2023.

Red: T. C. Steeple; .333 batting average; Most Methodical QB, 2025; Most Offensive QB, 2023.

Click 63: Red doesn't like his troops spread out so he draws them into the center. Blue favors the "fishnet" method and leaves his robots spread out in hopes of "catching" something along the way. Both start their drives to the opponent's back line.

Click 60: Blue runs into Red's solid force up the middle.

Click 52: Blue's rider is one space away from Red's comcen, but he doesn't see Red due to the forest.

Click 50: Blue gets a rider munched.

Click 43: Blue loses a grunt and rider.

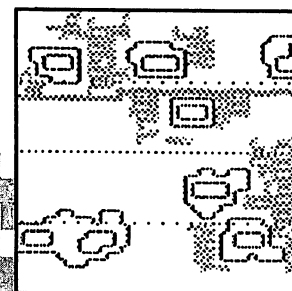
Click 36: There goes a another Blue grunt.

Click 11: There goes a another Blue rider; Red's forces proved to be concentrated and deadly. All of Red's men are still alive and well and have racked up all their territory points. Blue suffers from Robotus Depletus and is guaranteed to remain behind on territory points. Things look grim, even to the usually brash Blue. He starts to whistle through his front teeth, an unconscious reaction to stress.

Click 2: Blue knows he can't get as many territory points since several of his robots have been junked so he makes a last ditch effort to get points by attacking Red's comcen.

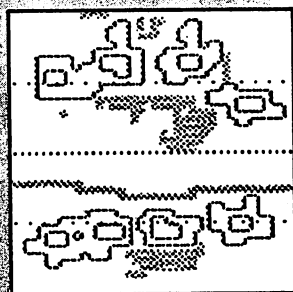
Boom! One hit does the trick. Blue ties it up.

Click 0: It's a draw. Hardly the most memorable event in any QB's career, but it beats losing.



JU - YN

10. GETTING INTO STRATEGY



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Face-Off

Blue: Gaff Winston; .340 batting average; Global War League Rookie of the Year, 2026; Recipient of Comcen Shock Player Award, 2025.

Red: Lou Lou Blindside; .359 batting average; Kiwantis' Comcen Jock of Year, 2022-25; Modern Wars Illustrated QB of Year, 2022.

Click 127: They both choose a setup that will let them blaze down to the opponent's back line through open terrain. This also happens to put them on opposite sides of the field. Red leaves a group in the back to prepare for an ambush when the time's ripe. Both start a run for points, keeping their spies in front to look for the enemy.

Click 110: The spies get their terrain points and can now cut towards the middle in search of the opponent. They don't go back down the sides they came; the enemy's not there or they would've rubbed elbows along the way.

Click 90: Both sides have moved most of their troops over the back line. When done, Blue has the point advantage over Red since she left the ambush group in reserve. She's not sweating this detail, though. If Blue is alert, he'll notice that Red is behind on points and that there's possibly a group of robots waiting for him somewhere.

Click 81: Blue's spies are in position to spot any enemy forces crossing the river.

Click 75: War starts with a few attacks on the Red spies. Blue is lining up behind the river while Red forms a mass attack.

Click 66: Red's riders start their ambush move from the back while Blue lines up along the river, ready to sweep. He takes a click or two to check across the river to make sure that Red isn't lined up along the opposite bank — standing waist-deep in cold water makes his troops vulnerable to fire. The coast is clear so he surges forth.

Click 60: Blue fires his drones on Red, making his comcen visible. Red takes advantage of this and moves closer to Blue's comcen.

10. GETTING INTO STRATEGY

Click 55: Blue begins a sweep on the right as soon as Red's comcen becomes visible and her front line is droned to helplessness. This is the major strategic mistake of the game. A continued defense might have resulted in a point win, but this greedy attempt at a KO left Blue vulnerable.

Click 45: Blue starts sweating; he feels the pinch of Red both north and south. He shuffles around as the space around him closes. Bad time for claustrophobia.

Click 40: Blue's troops start chasing Red's comcen, so she responds by running towards the west wall, away from the action. In the meantime, Blue's comcen is still seeing plenty of fireworks.

Click 35: Red's comcen escapes since Blue couldn't spare the attention to keep it in sight.

Click 22: Say goodnight, Blue. End of film.

Sluggers

Blue: Sod Acres; .350 Batting Average; Modern Wars News Player of the Year, 2022.

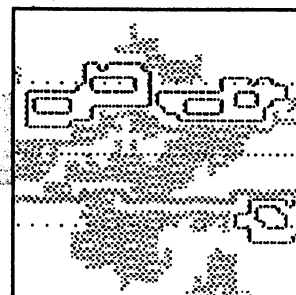
Red: Ryder N. Black; .320 Batting Average; GWL Most Improved, 2026.

Click 127: Blue lines up along the west wall. The comcen is protected with grunts in front of it and boomers just to the right. Farther to its right, riders create a protective wall. Blue's spies are spread along the front line, looking for the enemy. Red pulls an "amoeba," splitting his troops into two large bodies. One group sits along the west wall while the other waits up on the hill.

Click 125: Red spots Blue's comcen and sends his riders forward.

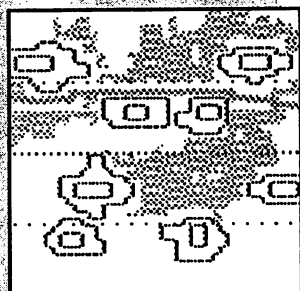
Click 120: Red realizes the size of the opposing force — oops!

Click 115: Red's spy immediately moves forward and it's its lucky day, finding Blue's comcen in less than ten clicks. Red retreats runs into Blue's riders — double oops!



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10. GETTING INTO STRATEGY



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- Click 114: Blue begins to surround Red's troops and starts weeding out his opponent's ranks. The drone game starts. A great target is a group of four enemy robots standing two by two. One drop of the drone and it's stun time. Two drops and it's bye-bye *times four* (except for the comcen, of course). It doesn't get any more economical than that. Red decides to take advantage of the spotted enemy comcen and creeps towards Blue.
- Click 108: Except for the spy, all of Red's western force is gone. Blue's robots smell easy points and start racing for the back line.
- Click 105: Red moves his grunt closer to Blue's comcen, while scooting his own a little east.
- Click 77: Red feels the heat from Blue's northwest forces and launches some drones before hightailing his comcen down the hill.
- Click 64: Blue drones Red's meek forces on the hill and goes on to clean up the last real resistance. A point win for Blue is now guaranteed.
- Click 54: Red gets points as he crosses over Blue's back line. Blue sends troops out to search for Red's comcen.
- Click 39: Blue makes an intensive move south to find Red.
- Click 31: Blue gets lucky and finds Red's comcen with his drone. Blue's grunts pull up next to the idle comcen and blast away at it.
- Click 25: It's not over til it's over. But this is over for Red.

Full War

Blue Quort Lo: .360 batting average; All-GWL Team, 2022; Recipient of Most Likely to Blitz Award, 2023.

Red: Jo Driver, .322 batting average; Member of U.S. Olympic Comcen Team, 2024.

Click 254: Blue starts out with a mostly defensive position. He digs into the hill, cloaks himself, and decides to wait it out for Red. Red figures that Blue will drive straight down

11. TECHNICAL INFORMATION

the middle through open terrain for fast points so she sets her troops up across from the hill. She also positions a small group on the west side of the field so she can slow down Blue's troops if he moves that way.

Click 245: On the western front, Red's spy finds Blue's recycler and sits on it.

Click 231: Blue first sees the approaching Red. He chooses to remain cloaked so he can ambush.

Click 227: Red's cloaked troops have Blue's small force surrounded and uncloaks.

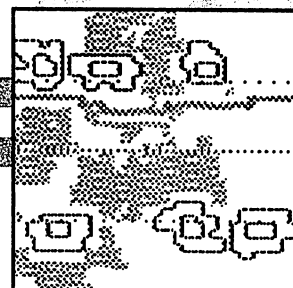
Supreme humiliation! Meanwhile, on the eastern front Red moves towards the hill.

Click 222: When Red hits the hill, she runs full force into Blue's troops who uncloak and surprise her. Heavy fighting starts. Both launch drones, but it's Blue who takes on the drone offensive, thinning Red's forces with each detonation. This is Red's major error.

As soon as it became clear that Blue's entire army was dug in on the hill, Red should've called off the attack and driven her comcen as far into the sunset as possible.

Click 212: Blue's forces are completely wiped out on the western front, but Blue is hardly worried over this sacrifice.

Click 205: Red tries to beat a retreat, but Blue drops a drone right on top of her and knocks her out.



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11. TECHNICAL INFORMATION

This section contains technical information. If you want the winning edge, this is recommended reading. It can make the difference between getting your face on the cover of the *Modem Wars Weekly* or *The Nobody Dispatch*.

Robot Energy

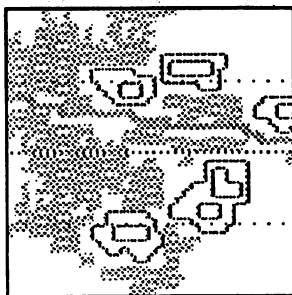
Robots start the game fully charged (energy = 100 percent). They lose energy whenever they're shot, missed, or droned. When energy drops to zero as a result of an attack, they're

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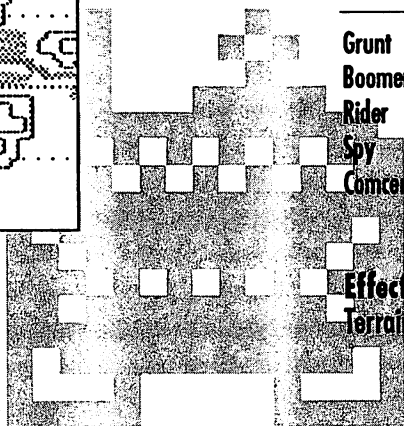
out of the game and zapped off the battlefield. Robots can repair their energy during the game. If a robot (other than the comcen) is not shooting or moving, it automatically repairs at a rate of 2 percent per click. When the comcen loses all its energy it's "knocked out." In Scrimmage, QB Sneak, and The Bomb, the comcen can't restore energy; all you can do is hope that energy doesn't hit zero before the battle's over. However, in the other scenarios, you can manually replace lost comcen energy.

Robot Speed

There are three speed categories. The Space Per Click figures are for robots moving through open terrain; the only exception is the spy, who moves at the same speed through all terrain. See "Effects of Terrain" for details on how certain terrain slow your robot's movements.



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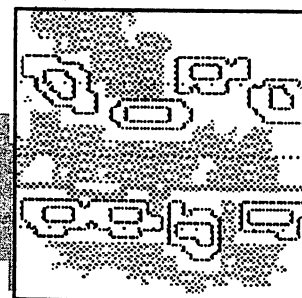
Robot Type	Speed	Space Per Click
Grunt	1	1/2 (base rate)
Boomer	1	1/2
Rider	2	1
Spy	3	1 through all terrain
Comcen	Depends on scenario	—

Effects of Terrain

Terrain can affect the movement, sighting and combat capabilities of your robots.

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Terrain type	Effect on movement	Effect on sighting	Effect on combat
Plain	None	None	None
Stream	Move at 1/3 speed.	None	Target in stream receives 10 points extra damage.
Forest	Move at 2/3 speed.	Can be spotted only by adjacent enemy; remains spotted up to two spaces.	Grunts and riders only fire at robots adjacent to them.
Plateau	None	Robots on plateau can see one space extra for each level of elevation. Robots can't be seen through hills.	Weapon range is increased by one space for each level of elevation. Damage done is increased by two points for each "difference of level" the shooter is above the target and decreased by two for each level the shooter is below the target.
Slope	Move at 1/2 speed.	Same as plateau.	Weapon range is increased by one space for each level of elevation. Damage effect for "difference of level" is reduced by one. Target on slope receives two points extra damage.



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Robot Movement

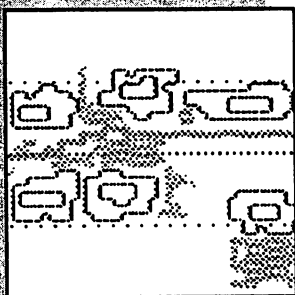
Robot groups and individuals can "move through" friendly groups and individuals; cloaked enemy robots can move through each other; spies can move through anyone. As a result, groups can get spread out, but they will retain their group formation and will return to it as soon as they are able to. However, if you select MEMBERSHIP or CUSTOM FORMATION, all the robots in the group will halt where they are and consider their arrangement to be their new formation.

Robot Facing

Robots face the direction they were last moving unless there's an enemy robot within range. In that case, they will turn and face that direction until they move or another enemy shows up. When a robot is selecting a target from multiple options, it will shoot at enemy comcen first (if possible), and then at the nearest unit. Once a robot selects a target in a certain direction, it will only turn towards a new target in a different direction if the new target is more than one space closer.

Robot Sighting

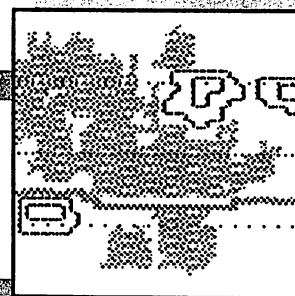
Robots sight other robots when they come within a designated range. In Standard Display mode, enemy robots won't show up on the Battle screen until they're sighted. A robot can't shoot at an enemy robot until it has sighted that enemy.



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Observer	Observee	Range
Grunt, rider, boomer or comcen	Undoaked grunt, rider, boomer or comcen	3 spaces
Grunt, rider, boomer or comcen	Cloaked grunt, rider, boomer or comcen	2 spaces
Spy	Undoaked grunt, rider, boomer or comcen	5 spaces
Spy	Cloaked grunt, rider, boomer or comcen	3 spaces
Spy	Spy	4 spaces



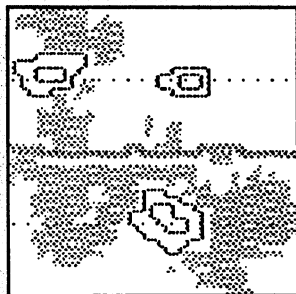
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Robot Weapon Range

Except for the spy, each robot has a weapon they'll shoot when the enemy's close enough. Terrain can affect a robot's shooting range, so be sure to refer to "Effects of Terrain" in this section for details.

Robot Type	Weapon	Range
Grunt	Laser	3 spaces
Rider	Laser	3 spaces
Boomer	Projectile Cannon	6 spaces
Spy	No weapon	—
Comcen	Drone	No range limit
	Missile	Radar scan area



NYSA —

Laser fire is also known as "line of sight" fire. Projectile cannon fire is also known as "indirect fire." Grunts and riders can't shoot if there is a friendly robot in their line of fire. However, robots on any slope or hill never have their shots blocked since they shoot over any robots in their line of fire. Boomers have cannons that fire at an angle, so their shots are never blocked. Cloaked robots cannot fire. It takes a robot one click to reload after each shot.

Effects of Flanking Attack

Grunts and riders cause the most damage when they hit the target in the back or sides. A shot in the side adds 10 extra points of damage, while a shot in the back adds 20 extra points of damage. Boomer shots aren't affected by the angle of attack since they fire from cannons; their shots arc and hit the target from above.

Damage from Enemy Fire

Damage that your robot takes depends on who's giving and who's getting. This table shows the percentage of damage a robot inflicts when it hits its target. For example, a rider must hit a boomer 5 times (at 20% damage per shot) to eliminate it. The numbers in bold (under the *Target: Comcen* column) represent the percentage both the damage a robot inflicts *and* the number of points you get for hitting that target. For instance, when a boomer hits a comcen once, it inflicts 10% damage *and* you get ten points. If the boomer hits a comcen 9 times, it inflicts 90% damage *and* you get 90 points. One more boomer hit, and you'll knock out the comcen.

Damage Table (by percent)

Shooter	Target				
	Grunt	Rider	Boomer	Spy	Comcen
Grunt	4	5	25	8	6
Rider	3	4	20	6	4
Boomer	12	16	8	8	10
Comcen					
Drone	50	50	50	50	24
Missile	28	28	28	28	6

