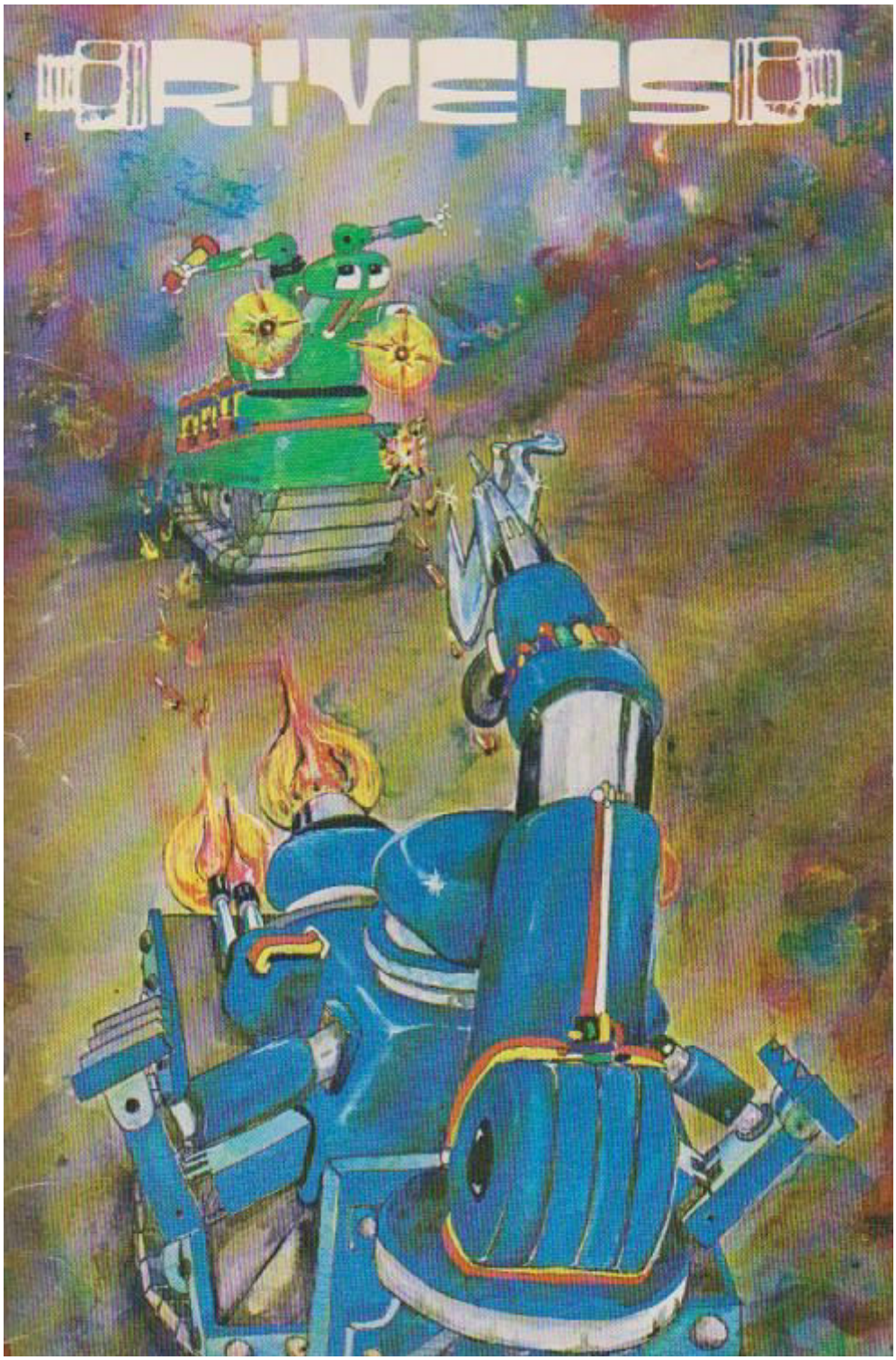

RIVETS

PREFACE

The appearance of the BOPPERS was prompted by economic factors and the types of coincidences that only occur in real life or in a bad science fiction novel. The major military powers in the later 21st century centred their strategies around the large cybertanks called Orcs?, Trolls?, some funny name (see Microgame 1); anyway, the third world powers also wanted cybertanks, but the price tag was too high. Imagine Ecuador buying a *Nimitz* class carrier.

But where there is a demand for a product, soon there is someone to satisfy that demand. The someone was Ocnor, an American manufacturing firm that was absorbed by a Japanese company which was later controlled by a group of Arab oil sheiks.

The BOPPERs sold like the proverbial hotcakes. Their popularity was due in part to their cost. They were VERY cheap. They were also easy to maintain, and didn't require a high technology to support them. Of course, the BOPPERS were much smaller than the cybertanks; they were extremely easy to destroy, and their programming was quite limited.

However, the narrow programming of the BOPPERs made them very attractive to certain buyers. BOPPERs were easily purchased by every military dictatorship in the world, since it was impossible for them to revolt or stage coups, the way so-called loyal troops were prone to do. In these countries, the BOPPERs were used primarily to keep the civilian populace in line so the El Presidente-Generalissimo-Dadas could concentrate on increasing their Swiss bank accounts.

Although the BOPPERs were built at automated factories, they were not true robots. They could not act in a completely independent manner (although they were know to behave irrationally at times), and would usually just follow the dictates of their programming. Also, the BOPPERs were partially controlled by a central brain unit, usually located at the factory or at the headquarters of the local dictator. Despite their programming and the control of the central brain unit, the BOPPERs did have a certain amount of free will – as much as the average automaton.

However, the biological warfare of the late 21st century, during the Paneuropean-Combine War, did away with most of the people in the world, and, free will or not, the BOPPERs were on their own.

Surprisingly, they did quite well. Due to their low technological needs they could live off the land, especially if the land had a few used car lots on it, and they had a high propensity for scavenging; they always got the best bargains at garage sales. Also the central brains were equipped with heuristic epistemological programming, which allowed the BOPPERs to learn through experience. Experience was important, since their average IQ was only slightly higher than that of most kitchen appliances. Despite their limited intellect, the BOPPERs developed a cybernetic equivalent of territoriality. This led to conflicts between neighbouring factories, escalating to full wars.

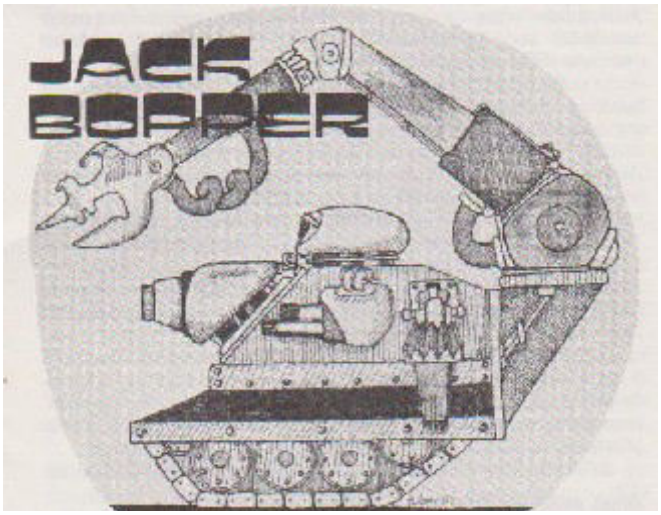
These wars established the BOPPERs as the rulers of the battlefields in the 22nd century. Actually they ruled the battlefield simply because they were the only things stupid enough to be on it ...

BOPPERs? Oh yeah. **B**attlefield **O**riented **P**re-**P**rogrammed **E**radicator **R**obots.

RIVETS

Robotic warfare in the 22nd century

Game design by Robert Taylor
Illustrated by Russell Ansley



The Jack Bopper is probably the best all-around fighting unit in the Bopper line. It has above-average fire power and movement, and is deadly in close combat – where it is famous for its battle cry of "Pop-a-top!"

The designer would like to acknowledge the following sources of inspiration: Mattel's "Robbie the Robot, Mechanical Man," all the robots in all the science fiction films, Vaughn Bode's **MACHINES**, Fred Saberhagen's "Berserker" series, and a real *smooooth* bottle of bourbon.

Thanks also go to those who playtested or commented on this game, including Howard Thompson, Steve Jackson, Ben Ostrander, Bill Williams, Bill Wade, Keith Gross, and Willie Sirois. A special thanks goes to the KVUE-TV engineering department – Rick Muir, Tim Morris, and David Carter – for their playtesting and for building a few prototype BOPPERs.

1.0 INTRODUCTION

RIVETS is a two-player tactical level science fiction game representing robotic warfare in the 22nd century. The players choose their BOPPER units, program them, and move them to attack their opponent's units. Each player attempts, through his manoeuvring and tactics, to destroy the computer complex that controls the other player's BOPPERs.

2.0 GAME COMPONENTS

2.1 Map. The map represents an area some 22 by 17 km. It is divided into hexagons (hexes) which govern movement. Each hex is numbered; these numbers aid in the setup for play. The map hexes represent different types of terrain, as follows:

Plain hexes contain no markings (the hexes containing the lettering "RIVETS" are plain hexes) ; *River hexes* contain meandering blue lines; *Forest hexes* contain tree symbols; *Marsh hexes* contain grass symbols; *Crater hexes* contain dark splash contours.

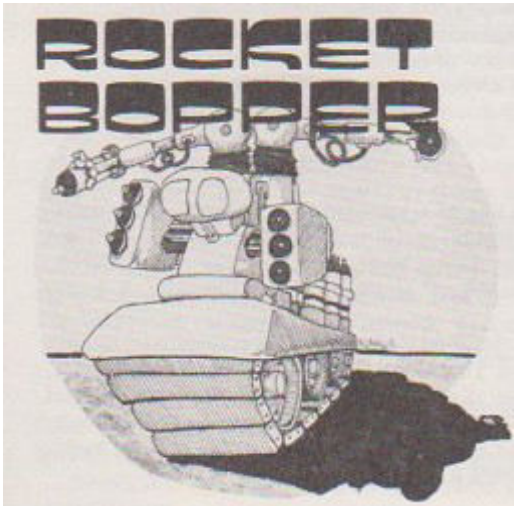
2.2 Unit counters. Each side has 56 playing pieces (which must be cut apart), indicating different types of units.

2.2.1. Ground Units. There a 5 types of ground units: Big Boppers (BBs); Jack Boppers (JBs); Light Boppers (LBs); Rocket Boppers (RBs); and Tiny Boppers (TBs).

2.2.2. Air Units. There are 2 types of air units: Dive Boppers (DBs) and missiles. Missiles are divided into 3 varieties: anti-aircraft (AA), anti-missile (AM); and air-to-ground (AG).

2.2.3. Bopper Control and Production Complex Units. The I and S class BCPC counters represent the immobile command-control-factory complex counters for each player's units. The N class BCPC represents an immobile factory complex that can be used by the player controlling it.

2.3 Extra Materials. Players will need pencils, paper and one die.



The RB is a self-propelled, self-loading rocket launcher. It has a high ground speed and an even higher survival instinct. The Rocket Bopper has unusually long arms so that it can load itself. Unfortunately the retraction units never functioned correctly, so the arms tend to drag the ground. This gives the RB a rather neanderthalic appearance and rough knuckles.

3.0 SETUP FOR PLAY

3.1 Counter Selection. Each player selects one set of counters, either red or white, to represent his forces.

3.2 Scenario Selection. The players decide which scenario they will play.

3.3 First Move. To determine which player moves first, each player rolls a die. The high roller will set up his forces first and move first. The low roller chooses which end of the map board (either north or south) he will play from, sets up second, and moves second.

3.4 BCPC Placement. On a piece of scratch paper, each player (in secret) writes the number of the hex where he will place his BCPC counter. This hex must meet the following conditions: (1) it must be within five hexes of that player's end of the map, (2) it must be a plain hex, and (3) it must be surrounded by six adjacent plain hexes.

3.5 Initial Programming. After choosing a scenario to play and (in secret) selecting the forces indicated by the scenario, the players (once again in secret) program their unit types.

Only these units can be programmed: LBs, JBs, RBs, BBs, and DBs. The other unit types (TBs, missiles, and BCPCs) have a fixed programming that is not subject to change or modification.

On a separate piece of scratch paper FOR EACH UNIT TYPE, the players write down what their unit types will be Programmed To Attack (PTA). This can be written in shorthand like this: BB → RB. This means that the player's Big Boppers are programmed to attack the other player's Rocket Boppers.

Each of a player's programmable unit types must be PTA a single enemy unit type. Ground units and DBs must each be PTA a specific type of ground unit. Missiles are already programmed – AAs attack DBs, AMs attack other missiles, and AGs attack BCPC units.

Like the missiles, the Tiny Bopper units are already programmed. The TBs carry (at the sacrifice of fire power and movement) a sophisticated program that allows them to attack all ground units. TBs cannot be reprogrammed, and all TBs built during a game are automatically equipped with this sophisticated programming.

All ground units, DBs, and AG missiles can attack the BCPC. This attack function does not require any programming. Each unit is "instinctively" programmed to destroy the enemy BCPC. The programming the players give their units is in addition to this already existing program.

The BCPC unit requires no programming. It can attack all ground units that come within range. It can fire AA missiles to attack enemy DBs, and AM missiles to destroy enemy missiles.

Note: During programming, the players also equip their DB unit(s) with missiles. See section 9.

3.6 Programming New Units. During the build part of a player's turn, he can produce new units. These units MUST have the same programming as the existing units of that type currently on the map.

EXAMPLE: A player has 3 of his 4 RBs destroyed. During the build part of his turn, he produces 2 new RBs. These new RBs must have the same programming as the

existing RB. If the existing RB is PTA LBs, the new RBs will also be PTA LBs.
New units of a type not on the map may have new programming.
EXAMPLE: In the above example, if ALL the player's RBs had been destroyed, the two newly built RBs could have ANY programming … regardless of how the earlier RBs had been programmed.

3.7 Re-Programming. The programming of a unit type can be changed by re-programming. To re-program a unit type, the following conditions must be met: (1) All of the counters of that unit type must return to their BCPC. (2) All of the counters of that unit type must be inside the BCPC ("inside" is defined as moving the units into the BCPC hex and placing them under the BCPC counter, where they CANNOT attack OR be attacked) before re-programming can begin. Re-programming takes one turn.
EXAMPLE: A player's 4 RB units have destroyed all of the enemy LB units that they were PTA. The player decides to re-program his RBs to attack JBs. The player begins moving his RB units back to his BCPC. Three of the RBs go inside the BCPC on turn 7, and on turn 8 the final RB goes inside the BCPC. During the movement phase of turn 9, the RBs (now re-programmed to attack JBs) move out of the BCPC. On his piece of scratch paper, the player crosses out RB → LB, and changes it to RB → JB.

3.8 First Player Setup. The player that moves first sets up first. He shows his opponent the hex number that he wrote down for his BCPC, and places the BCPC counter on that hex. Next, he places his Bopper units on the map. The DB unit(s) must be placed inside the BCPC. All other units must be placed within 5 hexes of the BCPC. These units are placed face down on the map.

3.9 Second Player Setup. The player that moves second sets up second. He shows the first player the hex number he wrote down for his BCPC, and places his BCPC on that hex. He then places his Bopper units on the map in the same manner that the first player did. These units are placed face UP on the map.

3.9.1. First Move. The player that is to move first turns his units face up and makes his first move, beginning the game.

4.0 VICTORY CONDITIONS

4.1 How to Win. A player wins when he has destroyed his opponent's BCPC unit. A BCPC unit is considered destroyed when its attack capability and its build capability are reduced to zero.

5.0 TURN SEQUENCING

5.1 Game Turns. RIVETS is played in turns. A complete game turn consists of the first player's movement and combat, and the second player's movement and combat.

5.2 Sequence of Events. The sequence of procedures listed below describes the order of events each player must go through during a complete game turn.

FIRST PLAYER TURN

(1) First player checks to see if he has enough control factors to operate his units. If not, he removes enough units of his choice to maintain a balance with the number of control factors.

(2) First player moves all his missiles on the map board, and resolves any combat caused by the missiles.
(3) First player receives his build points and builds new units inside his BCPC, and (if he controls it) the Neutral complex.
(4) First player programs or re-programs any units inside his BCPC according to the programming rules.
(5) First player moves his ground units, including newly built ground units, according to the ground movement rules.
(6) First player moves his DB units, including newly built DB units, according to the air movement rules.
(7) First player fires and moves his DBs' and BCPC's missiles, and resolves any combat caused by the new missiles.
(8) First player resolves all ground combat, including DB strafing attacks.
(9) Second player records the damage, if any, to his BCPC.

SECOND PLAYER TURN

(1) Second player, using his own units, repeats the sequence listed above.
(2) Second player marks off one complete game turn, and play reverts to the first player. The players follow these steps until the victory conditions are met.

6.0 GROUND MOVEMENT

6.1 Movement Allowance. Each ground unit has a specific number of movement points (MPs), shown in the upper right-hand corner of its counter. A Big Bopper, for instance, has 3 MPs. It costs a certain number of MPs for each ground unit to enter a hex, as described below.

6.2 Terrain Effects. Ground unit movement is affected by the terrain shown on the board. It costs all ground units 1 MP to enter a plain hex. It costs all ground units, except LBs, 2 MPs to enter a river hex. LBs enter river hexes at a cost of 1 MP. All ground units move through forest hexes at a rate of 1 hex per turn. Ground units must stop when they enter a forest hex, and cannot move again until next turn. No ground units, except LBs, can enter marsh hexes. LBs enter marsh hexes at a cost of 1 MP. No ground units can enter crater hexes.

6.3 General Movement. During the ground movement segment of a player's turn, he may move all, some, or none of his ground units. A ground unit never has to move, and when it does move it never has to use all of its MPs. However, a ground unit can never exceed its movement allowance, nor can MPs be saved from turn to turn, nor are MPs transferable from one unit to another.

6.4 Stacking. Only two ground units can be stacked together in a hex. These stacked units must be of the same unit type. Only BBs can stack with BBs, TBs with TBs, etc. Any number of units and units types may be stacked "inside" a BCPC, but only two ground units of the same type can be stacked ON TOP of a BCPC. The BCPC itself does not count against the stacking limit.

6.5 Movement Through Other Units. Any unit or stack of units may move through a hex occupied by a friendly unit or a stack of friendly units. Ground units can never move onto or through enemy ground units except in an overrun attack.

7.0 GROUND COMBAT

7.1 Combat Strength. The combat strength of a unit is expressed in terms of a specific number of combat points, shown in the upper left-hand corner of its counter. A Big Bopper, for example, has a combat strength of 5 combat points. The combat strength of a unit cannot be divided and used in more than one battle per turn.

7.2 General Combat. Ground combat must occur when a player's units, at the end of the player's movement segment, are adjacent to enemy units that the player's units are PTA. The player moving his units is the attacker, and his opponent is the defender. For example, after moving all his ground units according to the ground movement rules, a player has one of his BBs, which are PTA LBs, adjacent to an enemy LB. Since the BB is PTA LBs, it must attack the LB. If the same BB were adjacent to a TB, it could not attack the TB since the BBs are not PTA TBs.

7.3 Resolving Combat. For each separate battle, the combat strengths of the attacking units are totalled and then compared to the total combat strengths of the defending units. This ratio of the attacker's to the defender's strengths is rounded down in the defender's favour to one of the basic odds shown on the Combat Results Table (CRT). The attacker's factor is stated first, then the defender's factor. For example, 2 BBs attack an RB. The ratio is 10 to 2, which rounds down to a 5-1 on the CRT. A JB attacks 4 LBs. The ratio is 3 to 4, which rounds down to a 1-2 on the CRT.

If a defending unit is being attacked by a unit that it is not PTA, then the attacker gets the combat add. The combat add moves the basic odds one column to the right on the CRT. A player can only get one combat add per battle. For example, 2 JBs attack 2 RBs at 6 to 4, which rounds down to 1-1. The RBs are not PTA JBs. Due to the combat add, the 1-1 becomes a 2-1. A BB and a TB attack 2 JBs at 6 to 6, which rounds down to a 1-1. The JBs are PTA TBs, but the attacker still gets the combat add due to the BB, and the odds become 2-1.

After figuring the basic odds and determining if the attacking units get the combat add, the attacker rolls the die and matches the die roll with the odds on the CRT to get the combat results. For example, a BB attacks an RB at 5 to 2, which rounds down to a 2-1. The RB is not PTA BBs. The 2-1 therefore becomes a 3-1 due to the combat add. The attacker rolls the die and gets (for example) a 4. In the 3-1 odds column, a 4 produces a result of DX, which means the defending RB is destroyed and removed from the board.

NOTE: attacks against and by the BCPC do not get the combat add. Attacks by the DB units do not get the combat add.

7.4 Combat Procedure. When the attacking player has finished moving his units, he announces what attacks he is making. The attacking player shows the programming information of his attacking units to the defending player. The defending player shows the programming information of his defending units (that are PTA the units attacking them) to the attacking player. If a defending unit is being attacked by a unit that it is not PTA, the defending player does NOT have to reveal the programming of that type of unit. The defending player only has to reveal the programming of his units when they are attacked by enemy units that they are PTA.

7.5 Multiple Unit Combat. When a single defending unit is attacked by two or

more units, the combat strengths of the attacking units are totalled into a single combined attack factor, and the attack is resolved as a single battle. When a single unit attacks two or more defending units, the combat strengths of the defending units are totalled into a single combined defence factor, and the attack is resolved as a single battle.
When several units attack several enemy units, the attacker may chose to divide the combat into more than one battle, as long as (a) each of his units attacks only once, (b) each enemy unit is only attacked once, (c) each of his units attacks only adjacent units they are programmed to attack and (d) EVERY enemy unit adjacent to a unit programmed to attack it undergoes an attack.
The attacker may choose to attack certain enemy units at poor odds so as to gain better odds over other enemy units. This sacrificial style of attack cannot be done at odds worse than 1-5. If a unit, at the beginning of its combat turn, is in a position where it would be forced to attack at worse than 1-5 odds, then that unit is considered destroyed. It is removed from the board BEFORE any combat is resolved.
An attacking unit can only attack once per turn. A defending unit can only be attacked once per turn.
Remember: When it is your turn to attack, all enemy units adjacent to units PTA them MUST somehow be attacked.

7.6 Ground Unit Attacks on BCPC Units. All ground units can attack BCPC units. Attacks on the BCPC cannot be combined with attacks on ground units. For example, 3 LBs cannot attack 1 TB and 2 factors of the BCPC's build capability in a single battle. The BCPC must be attacked as an independent target.
Ground units must be adjacent to a BCPC in order to attack it. Exception: BB and RB units have range weapons and can attack the BCPC units from a distance.
Attacking ground units that are adjacent to the enemy BCPC and also adjacent to enemy ground units that they are PTA may ignore the ground units and attack the BCPC. However, the attacking units (using the multiple combat rules) may divide up the combat so that some units can attack the BCPC, while other units attack the enemy ground units.
BB and RB units can attack the BCPC units (and only the BCPC units) by shelling and rocket fire from a distance. These units do not need to be in line-of-sight to fire at the BCPC. This chart shows the combat strengths of the BB and RB units at their different ranges:

BB	Range in hexes	5	4	3	2	1
	Combat strength	1	2	3	4	5
RB	Range in hexes	2	1			
	Combat strength	1	2			

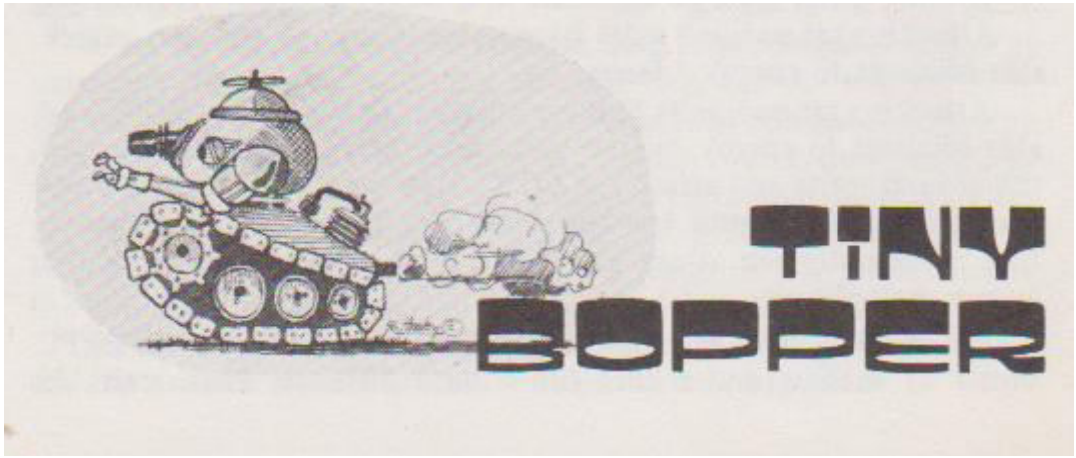
When units attack a BCPC, the attacking player chooses which capability (build or attack) his units will attack. Also, the attacking player chooses how many factors his units will attack. Each factor in a BCPC's attack and build capability has a (defensive) combat strength of one combat point. The combat strength of the attacking units is compared to the number of factors that the attacking player has chosen to attack. The ratio of the attacking unit's combat strength to the totalled

combat strength of the factors being attacked is rounded down in the defender's favour to one of the odds shown on the BCPC CRT. The attacker rolls the die, and matches the roll with the odds ratio on the BCPC CRT to get the combat results. If the attack is successful, the defender, on his BCPC record sheet, checks off the number of factors that the units attacked.

EXAMPLE: An inferior BCPC is attacked by 2 BBs, 3 RBs, 1 JB, and 1 LB. The attacking player divides up the combat as follows: The 2 BBs attack 5 factors in the build capability. The odds are 10 to 5, which rounds down to a 2-1. The 3 RBs each attack a single factor in the BCPC attack capability. The odds are 2 to 1 for each of the three battles. The JB attacks three factors in the attack capability. The odds are 3 to 3, which rounds down to a 1-1. The LB attacks one factor in the build capability at 1 to 1 odds.

The BBs' attack is successful, as are the JB and LB attacks. Two of the RBs' attacks are successful, while the other failed. The BCPC is damaged as follows: The BBs and the LB destroyed 6 factors in the build capability. The BCPC is reduced to a build capability of 2 build points. The JB and the 2 RBs destroyed 5 factors in the BCPC attack capability. The BCPC is reduced to an attack capability of 2 combat units. Also the control capability of the BCPC is reduced to 19 units.

The Tiny (pronounced "teeny") Bopper is equipped with an extra-large epistemological brain unit. This tough robot can identify all enemy units and will attack them with relish.



7.7 Timing of Attacks on BCPC. A player may make his attacks on an enemy BCPC in any order and may observe the results of each attack before announcing and carrying out the next, in order to most efficiently use his strength.

7.8 BCPC Attacks on Ground Units. BCPC units of the Superior and Inferior types can attack all ground units, but a BCPC never has to attack and can pick which enemy units it will attack. The BCPC can combine its combat strength with other units to attack enemy units.

An Inferior BCPC can choose to attack any ground units that are adjacent to it. An Inferior BCPC can attack with a combat strength of 3 combat points. These combat points can be divided up into a number of different attacks. For example, all 3 combat points could be used to attack one enemy unit, or three separate enemy units could be attacked with one combat point each, etc.

A Superior BCPC can choose to attack any enemy ground units within two hexes of it. A Superior BCPC can attack with a combat strength of 4 combat points. Like the

Inferior BCPC, these combat points can be divided into a number of different attacks.
Adverse combat results on the CRT do not affect the BCPCs. If a BCPC attacks a ground unit and rolls an AR or AX on the CRT, treat these results as NE. If the BCPC's attack was combined with other units, the adverse results DO affect the other units.

8.0 AIR MOVEMENT

8.1 Movement Allowance. Each DB has a movement allowance of 6 MPs. Each missile has a movement allowance of 8 MPs.

8.2 Terrain Effects. The terrain features on the map have no effect on air movement. It costs any air unit 1 MP to enter any hex.

8.3 Stacking. Air units do not count against the stacking limit. Any number of air units can occupy the same hex, even if that hex also contains ground units.

8.4 General Movement. During the air movement segment of a player's turn, he must move ALL of his air units. DBs are required to move at least one hex. This mandatory hex is the hex that the DB is facing at the beginning of its movement segment. The facing hex is defined as the hex directly ahead of the DB counter – that is, the hex that the silhouette's nose is pointing at. After this mandatory move, the DB can stop moving – or it may continue to move up to the limit of its movement allowance. If it continues to move, the DB may now enter, regardless of its facing, any adjacent hex. At the end of its movement, the DB can be faced any way the player wants. The facing changes for a DB do not cost any MPs.
All missiles MUST move their full movement allowance each turn. Missiles remain on the map for two turns. At the end of their second movement, if they have not detonated or been destroyed, they are removed from the map board.
Missiles must make the same first mandatory hex move that DBs make. After this mandatory move, the missile may change facing. Facing changes cost missiles 1 MP per change. A missile can only make one facing change per hex.
Missiles fired from a DB must enter the hex the DB is facing. After that mandatory move, the missiles can be moved as the player wishes.
Missiles fired from a BCPC unit have a choice of six facings. The facing of a missile fired from a BCPC unit depends on which adjacent hex the missile enters. A missile entering the hex north of the BCPC will be facing north, a missile entering the hex northeast of the BCPC will be facing northeast, and so on.
NOTE: During the air movement segments of a player's turn, he may move all his air units in any order that he chooses.

9.0 AIR COMBAT

9.1 Combat Strength. The combat strength of a DB is six combat points. This combat strength is used when the DB makes a strafing attack against ground units or a BCPC. DBs have their combat strength halved when they attack ground units in forest hexes. The combat strength of a DB cannot be divided and used in more than one battle per turn. Missiles have an absolute combat strength, and destruction of a target hit by a missile is automatic.

9.2 General Combat. A DB can carry two missiles. The types of missile that a

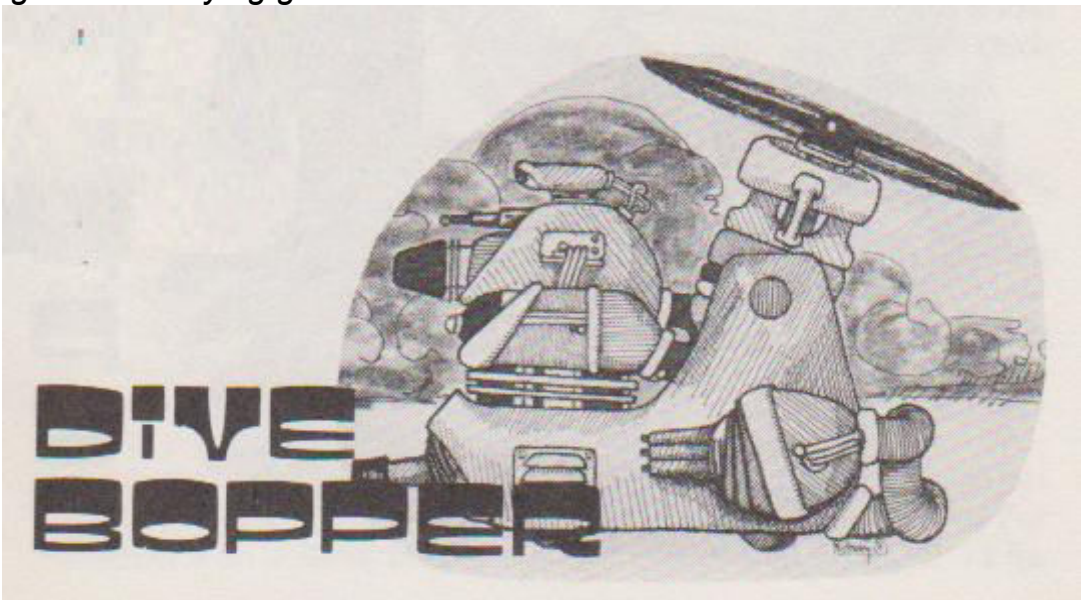
DB can carry are AA, AM and AG. After a DB has fired its missiles, it can return to its BCPC to reload. A DB must go inside its BCPC to reload; it emerges on the movement phase of the next turn. The BCPC contains an unlimited amount of missiles.
After a DB has finished its movement it may fire a missile, if it has any. A DB may fire only one missile per turn. If the DB does not fire a missile, it may execute a strafing attack. A DB cannot strafe and fire a missile in the same turn. DBs can only strafe the ground unit type they are PTA, or the enemy BCPC.
To strafe an enemy ground unit or the BCPC, the DB must be on top of the enemy counter. Strafing attacks may be combined with ground attacks, and they are resolved in the same manner using the ground combat rules. Adverse results on the CRT do not affect an attacking DB. If a DB attacks a ground unit and rolls an AX or AR on the CRT, treat these results as NE. If the DB's attack was combined with a ground attack, the adverse results DO affect the ground unit(s). DBs NEVER get the combat add.
EXAMPLE: A DB PTA JBs strafes a stack of JBs, which are PTA LBs. The JBs are also being attacked by a BB. The attacker divides up the combat as follows: The DB attacks one of the JBs at 6 to 3, which rounds down to a 2-1, while the BB attacks the remaining JB at 5 to 3, which rounds down to a 1-1 but becomes a 2-1 due to the combat add.
EXAMPLE: A DB PTA RBs strafes a stack of RBs. The DB must attack both RBs. The odds are 6 to 4, which rounds down to a 1-1.

9.3 Missile Combat. Missile combat is automatic. AA missiles can only attack DBs, AM missiles can only attack other missiles, and AG missiles can only attack BCPC units. Missiles only attack enemy targets.
An AM or AA missile destroys its target when it moves into the same hex the target occupies, or when the target moves into the same hex that the missile occupies. This destruction is automatic: the missile detonates, the target is destroyed, and both are removed from the board. One missile can only destroy one target.
EXAMPLE: An AM missile enters a hex containing two AG missiles. One of the AG missiles is destroyed by the AM missile. They are removed, leaving one AG missile in the hex.
EXAMPLE: 2 DBs occupying the same hex are forced, by the mandatory movement rule, to enter the hex that they are facing. This hex contains an AA missile. When the two DBs enter the hex, one is destroyed by the AA missile, and it and the AA missile are removed from the map. The surviving DB can continue to move.
EXAMPLE: An AA missile enters a hex containing 2 AM missiles. One of the AM missiles detonates and destroys the AA missile; they are removed from the board, leaving one AM missile in the hex.
AM missiles are superior to AA and AG missiles, in that an AM missile will detonate before an AG or AA missile can attack its target. For example, an AA missile enters a hex containing an AM missile and a DB. The AM missile detonates and destroys the AA missile before the AA missile can attack the DB.
In air combat, the player moving his air units can choose which target a missile will strike. NOTE: this rule is subsidiary to the AM superiority rule.

EXAMPLE: A player moves an AM missile into a hex containing two AA missiles. One AA missile is facing in such a manner as to be no threat to the player's DB, while the other AA is a direct threat. Since the player moving his air units can choose his units' targets, the player of course destroys the threatening AA missile.

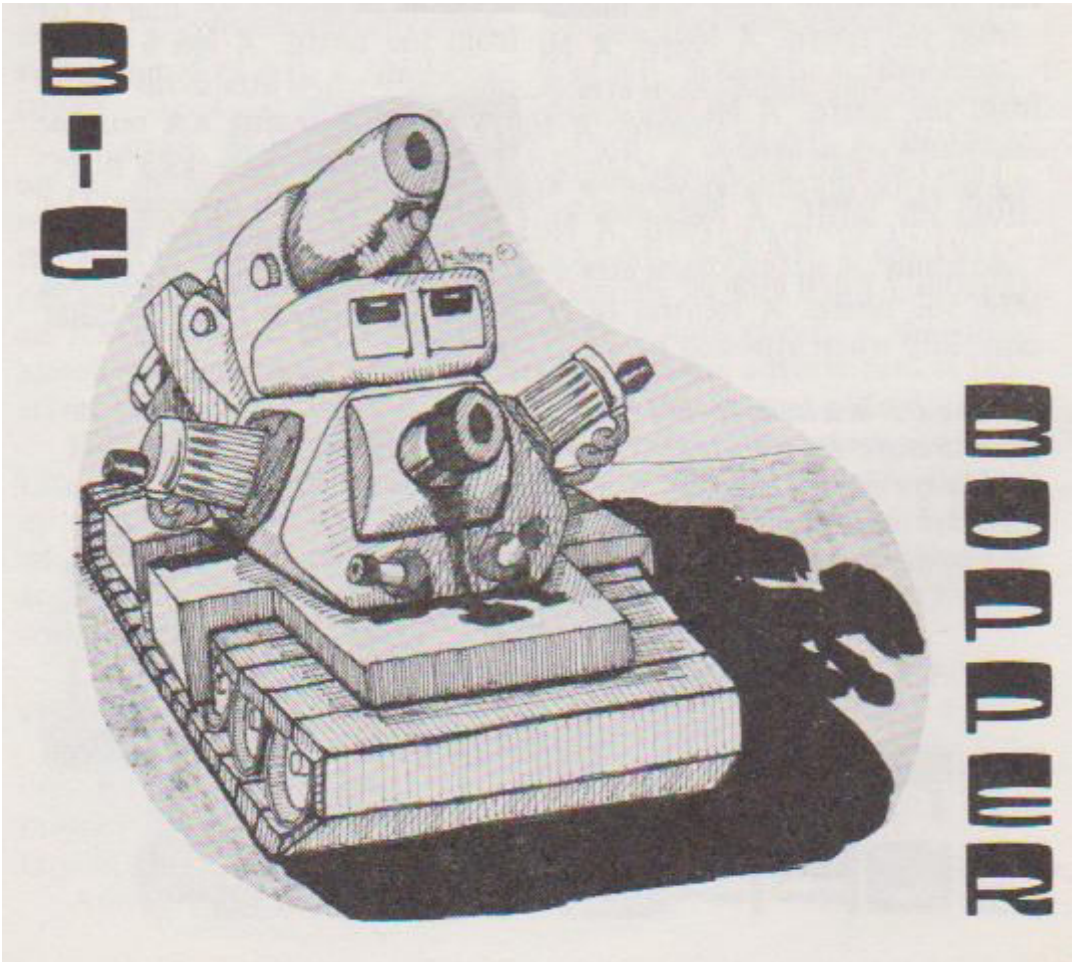
9.4 Air-to-Ground Missile Fire. The AG missile attacks a BCPC unit when it enters the same hex that the BCPC unit occupies. The AG missile automatically destroys one factor in each of the BCPC's build and attack capabilities. After its attack the AG is removed from the board. A neutral BCPC loses two factors from its build capability when attacked by and AG missile.

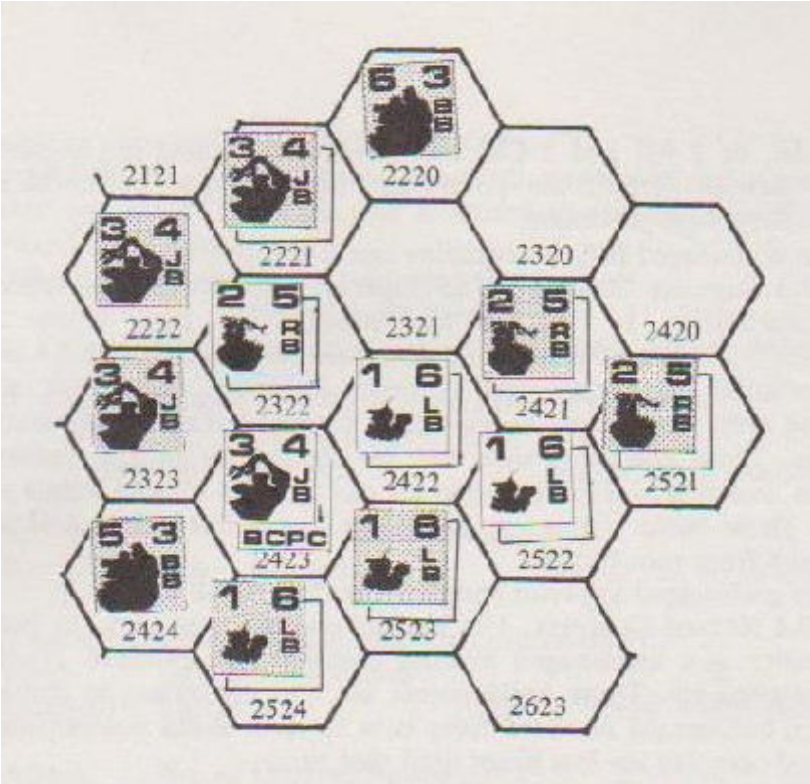
The DB is a helicopter-type aircraft. Its favourite targets are other DBs, but it enjoys maiming and destroying ground units.



EXAMPLE: Red is attacking. His units are programmed as follows: BBs → JBs, JBs → RBs, RBs → LBs, LBs → TBs. White's units are programmed as follows: RBs → JBs, JBs → LBs, LBs → LBs. Red decides to divide up the combat as follows: the BB at hex 2220 attacks the BCPC with a combat strength of 3 combat points. The other BB attacks the BCPC with a combat strength of 5 combat points. Each stack of LBs attacks the BCPC with 2 combat points, while the JB at hex 2323 attacks with 3 combat points. The JB at 2222 attacks one of the RBs at 3 to 2, which rounds down to a 1-1, while the other two JBs attack the remaining RB at 6-2, which rounds down to 3-1. One of the RBs at hex 2421 attacks the stack of LBs at hex 2422 at 2-2, which rounds down to 1-1, and this becomes a 2-1 due to the combat add. The other RB attacks one of the LBs at hex 2522 at 2-1, which becomes a 3-1 due to the combat add. The stack of RBs at hex 2521 attacks the remaining LB at 4-1, which becomes a 5-1 due to the combat add. Red divides up the combat against the BCPC as follows: the adjacent BB attacks 5 factors in the build capacity at 5-5, which rounds down to a 1-1. The other BB attacks 1 factor in the attack capability at 3-1. The JB also attacks 1 factor in the attack capability at 3-1. One stack of LBs attacks 1 factor in the build capability at 2-1, while the other LBs each attack 1 factor in the attack capability at 1-1. If all of Red's attacks against the BCPC were successful, this is what White's BCPC record sheet would look like after the attack. White's Inferior complex was undamaged before this battle.

A large ground unit with enormous fire power, the Big Bopper is armed with a high-energy laser, a long range howitzer, and a number of smaller guns. Of course, all this equipment makes the BB rather slow-moving; this, combined with its size, makes it an inviting target.





Build	No. of Build Points	1	2	3
Capability	Factors	ooooo	ooooø	øøøøø

Attack	No. of Combat Points	1	2	3
Capability	Factors	ooooo	ooooo	oøøøø

The BCPC now has a build capability of 2 build points, and an attack capability of 3 combat points. It can now only control 20 units.
EXAMPLE: Using the same units and map situation, let's assume White is the attacker. White decides to divide up the combat as follows: his BCPC attacks the JB at 2323 with 1 combat point at 1-3; the BCPC also attacks the stack of LBs at 2524 with 2 combat points at 2-2, which rounds down to a 1-1. One of the RBs attacks the JB at 2222 at 2-3, rounded down to a 1-2. The other RB attacks the 2 JBs at 2221 at 2-6, which rounds down to a 1-3. The JB and the two stacks of LBs attack the stack of LBs at 2523 at 7-2, which rounds down to a 3-1; this becomes a 4-1 due to the combat add.

10.0 BOPPER CONTROL AND PRODUCTION COMPLEX

10.1 BCPC Types. The BCPC units come in three types: Inferior, Superior, and Neutral.

10.2 Inferior Complex. The Inferior complex has the following capabilities: It can fire one missile per turn. It has an unlimited number of missiles of all types, but can fire only AA and AM missiles. An undamaged Inferior complex can attack any adjacent ground unit(s) with a combat strength of 3 combat points. These combat

points may be divided in any way.
An undamaged Inferior complex can also produce 3 build points per turn. These build points are equivalent to combat points. For example, with 3 build points, a player could build 3 TBs, or 3 LBs, or 1 JB, or 1 RB and 1 LB, etc. These build points can be saved from turn to turn. Build points can only be used at the BCPC where they were produced.
An undamaged Inferior complex can control 30 units.

10.3 Superior Complex. The Superior complex has the following capabilities: It can fire two missiles per turn. It has an unlimited number of missiles of all types, but can fire only AA and AM missiles. An undamaged Superior complex can attack any ground units within two hexes with a combat strength of 4 combat points. These combat points can be divided up in any fashion.
An undamaged Superior complex can produce 4 build points per turn. These build points are equivalent to combat points, and can be saved from turn to turn.
An undamaged Superior complex can control 40 units.

10.4 Neutral Complex. The Neutral complex has only the build capability. An undamaged Neutral complex can produce 3 build points per turn. These build points are also equivalent to combat points, but cannot be saved from turn to turn. Build points from a Neutral complex are lost if not used that turn.
Units may move onto a Neutral complex, but no units can go inside it. When a ground unit moves onto a Neutral complex, it is "switched on" and begins producing its build points. The player in control of the Neutral complex, i.e., the player that has a ground unit on that complex, is the controlling player and can use its build points to produce his own units. These units are programmed according to the new programming rules, section 3.6. Neutral complexes cannot re-program units.
Control of the Neutral complex can shift back and forth between players during a game. A player MUST have a ground unit on the Neutral complex in order to receive build points there. Once a unit is built, though, it remains under the control of the player who held the Neutral complex at the time it was built. A Neutral complex can be destroyed by destroying its build capability through the normal combat method. The Neutral complex is simply a factory. It can build units, but cannot control them.

10.5 DB and TB Unit Limitations. The number of RB, LB, BB, and JB units that a Superior or Inferior complex can operate effectively is only limited by the number of unit counters provided in the game and the control capability of the complex. However, the complexity of the DB and TB units limits the number of these units that can be effectively operated by a complex. A player with an Inferior complex can never have more than 1 DB and 4 TBs on the board at any time. A player with a Superior complex can never have more than 2 DBs and 8 TBs on the board at any time. As DB and TB units are destroyed, a player may use build points to construct replacements, but he is still limited as to the number he can have on the map at any one time.

10.6 Movement and Retreat into BCPCs. Ground units that receive a "retreat" result while adjacent to or on top of their BCPC may retreat inside their BCPC. The movement from on top of to inside or vice versa does not cost any MPs.

10.7 BCPC Record Sheets. Each player should make a record sheet for his BCPC unit, and a record should be kept for any Neutral unit in the game.
A Neutral complex has the following record sheet:

Build	No. of Build Points	1	2	3
Capability	Factors	ooooo	ooooo	ooooo

An Inferior complex has the following record sheet:

Build	No. of Build Points	1	2	3
Capability	Factors	ooooo	ooooo	ooooo
Attack	No. of Combat Points	1	2	3
Capability	Factors	ooooo	ooooo	ooooo

A Superior complex has the following record sheet:

Build	No. of Build Points	1	2	3	4
Capability	Factors	ooooo	ooooo	ooooo	ooooo
Attack	No. of Combat Points	1	2	3	4
Capability	Factors	ooooo	ooooo	ooooo	ooooo

The circles represent the factors that determine the Build and Attack capabilities of the BCPCs. The factors also determine the Control capability of the BCPCs. Each factor controls one unit. Only ground units and DBs need controlling factors; missiles do not.
As a BCPC takes damage (the circles are checked off from right to left), its ability to attack enemy units, build new units, and control units is decreased. When all the factors in a specific capability are destroyed, that capability is reduced to zero. When all the BCPC's factors are destroyed, then the BCPC is destroyed and its player has lost the game.
The missile fire of the Superior and Inferior BCPC exists as long as one unchecked circle remains on their record sheet.
EXAMPLE: A player's Inferior complex has 9 build factors and 11 attack factors destroyed. The complex now has a build capability of 2 build points and an attack capability of 1 combat point. Also, the complex can only control 10 units. At the beginning of his turn, the player must see if he has enough control factors to operate his units. If his units on the board exceed his number of control factors, then he must remove enough units (of his choice) from the board to maintain balance with the number of control factors.

Build	No. of Build Points	1	2	3
Capability	Factors	ooooo	oøøøø	øøøøø
Attack	No. of Combat Points	1	2	3
Capability	Factors	oooøø	øøøøø	øøøøø

NOTE: The control and attack capabilities of BCPCs are functional at the start of the game. The build capability function varies according to the scenario being played.

11.0 SCENARIOS

11.1 Learning Scenario. Each player selects a force of Boppers totalling 30 combat points in combat strength. Each player gets one Inferior complex. No DB units are allowed in the learning scenario. The build capability function of the players' BCPC units starts on the 5th game turn.

11.2 Basic Scenario. Each player selects a force of Boppers totalling 36 combat points in combat strength. Each player gets one Inferior complex. DB units are allowed in the basic scenario. The build capability function of the players' BCPC units starts on the 5th game turn.

11.3 Intermediate Scenario. Each player selects a force of Boppers totalling 48 combat points in combat strength. Each player gets one Inferior complex. DB units are allowed in the intermediate scenario. One Neutral complex is also used in this scenario. The build capability function of the players' BCPC units starts on the 5th game turn.

NOTE: Due to the inclusion of the Neutral BCPC, the setup is altered. After selecting and programming their forces, the players show each other their BCPC locations. A hex equidistant from the two BCPCs is then used for the Neutral complex's position. The Neutral complex MAY be placed on a forest or river hex. Debates over the exact positioning of the Neutral complex are to be resolved by die roll.

When a Neutral complex is used, all Boppers must be set up within 2 hexes of their owner's BCPC at the beginning of the game.

11.4 Advanced Scenario. Each player selects a force of Boppers totalling 60 combat points in combat strength. Each player gets one Superior complex. DB units are allowed in the advanced scenario. One Neutral complex is also used. The build capability function of the players' BCPC units starts on the 10th game turn. The alternate setup method described above is used.

BCPC COMBAT RESULTS TABLE

The BCPC CRT is used only to resolve attacks on the BCPC units.

		Combat Odds					
		1-2	**1-1**	**2-1**	**3-1**	**4-1**	**5-1**
Die Roll	**1**	NE	NE	NE	NE	NE	X
	2	NE	NE	NE	NE	X	X
	3	NE	NE	NE	X	X	X
	4	NE	NE	X	X	X	X
	5	NE	X	X	X	X	X
	6	X	X	X	X	X	X

NE: No effect.

X: Hit. Number of factors attacked by attacking unit(s) are destroyed.

COMBAT RESULTS TABLE

Die Roll	Combat Odds									
	1-5	1-4	1-3	1-2	1-1	2-1	3-1	4-1	5-1	6-1
1	AX	AX	AX	AX	AX	AR	NE	NE	DR	DX
2	AX	AX	AX	AX	AR	NE	NE	DR	DX	DX
3	AX	AX	AX	AR	NE	NE	DR	DX	DX	DX
4	AX	AX	AR	NE	NE	DR	DX	DX	DX	DX
5	AX	AR	NE	NE	DR	DX	DX	DX	DX	DX
6	AR	NE	NE	DR	DX	DX	DX	DX	DX	DX

No effect: The CRT indicates no-effect results by NE. An NE result means that no units are destroyed in the combat.

Retreat: The CRT indicates retreat results by AR and DR. An AR result means that all the attacking units in that battle must retreat. A DR means that all defending units in that battle must retreat. Units forced to retreat are moved one hex in any direction by their owner. Retreating units are eliminated if they have to move on top of enemy units, or on top of friendly units if they cannot stack with them for any reason. Units forced to retreat off the map, into craters, or into marshes (except for LBs) are also eliminated.

Destruction: The CRT indicates destroyed results by AX and DX. An AX result means that all the attacking units in that battle are destroyed and removed from the board. A DX result means that all the defending units in that battle are destroyed and removed from the board.

Overrun Attacks: When the attack strength in a given battle would be 6 or more times greater than the defence strength – i.e., when the combat odds are 6 to 1 or better – the attack is an overrun. The defenders are automatically eliminated during the attackers' MOVEMENT phase. Units which did not participate in the overrun attack may then move through (but may not stop on) the hex formerly occupied by the defending unit.
NOTE: The enemy BCPC may not be overrun. Players cannot move ground units onto or over the enemy BCPC.

Movement After Combat: Any time attacking units destroy or retreat defending units, the attacking units may move into the hex vacated by the defending units. Although players may not move onto the enemy BCPC, they may move on top of a Neutral complex after destroying or retreating the enemy units defending it.

Gamers are encouraged to experiment with variations of these rules. New scenarios, descriptions of play (factual or fictionalised), comments on play, and suggestions for optional rules will be considered for publication in *The Space Gamer*.

The Light Bopper is a speedy ground unit that rides on an air cushion and is powered by a ramjet engine. Armed with only a low intensity laser canon, the LB uses its high speed to elude enemy units until it can deliver a quick back-stabbing attack.

The **Boppers** were robotic war machines. When the war ended and everyone was dead, the boppers kept on fighting. But what else could you expect from robots with the average intelligence of an electric can opener?

RIVETS is a tactical level science fiction game of robotic warfare in the 22nd century. The players choose their robot armies, program them and manoeuvre them to destroy the computer complex that controls the enemy's robots.
Game components included this rulebook, an 8¼" by 14" game map, and 118 counters.

Game design by Robert Taylor

METAGAMING

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