



# TEXAS INSTRUMENTS HOME COMPUTER

## KROLL & PRUMNI

### DISK VERSION

This game is designed to be used with the Texas Instruments TI-99/4A Home Computer only.

*A fight between galactic empires. The empires of the Kroll and the Prumni, different civilizations but both unstable because of the inner separatist movements, are going to crash. They both have the political and economical necessity of conquering and colonizing the greatest number of small planets rich in raw materials. In case of defeat they risk the destruction of both regime and empire.*



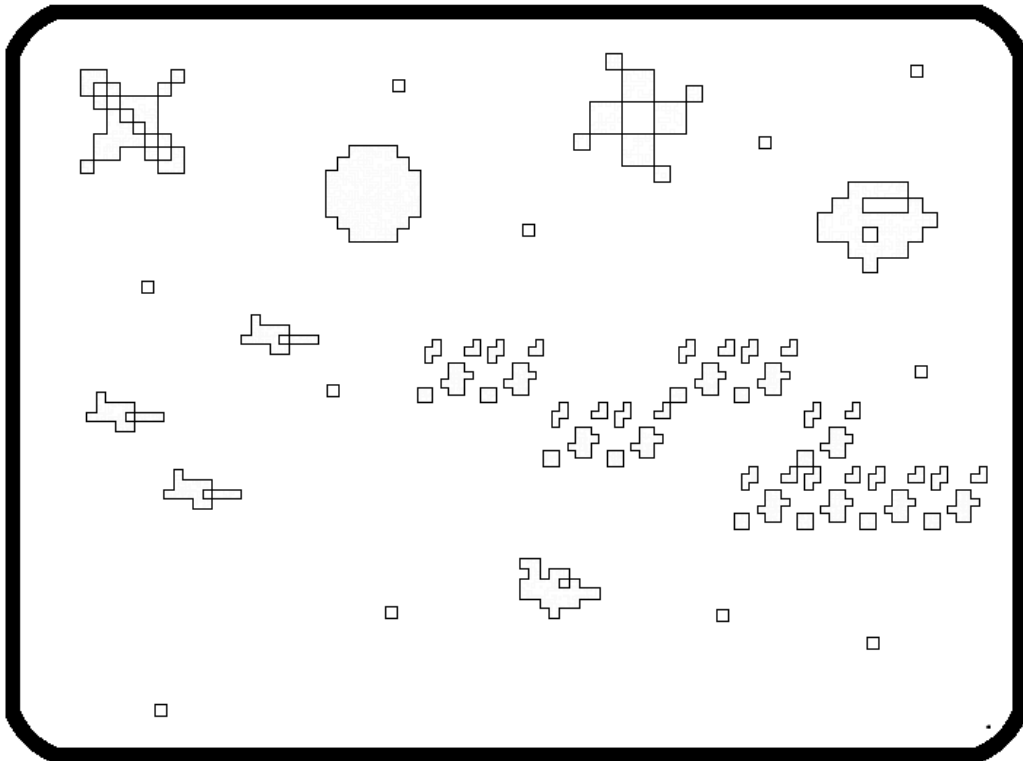
#### System

- requirements:
- TI Extended Basic
  - 32K Memory Expansion
  - Floppy Disk Drive
  - TIPI (for mouse support)

## Quick Reference Guide

<b>FILE TO LOAD</b>	DSK1.KROLL
<b>MOUSE</b>	Scrolls the map and selects units or orders
<b>CTRL X</b>	Ends the player's turn in a specific phase
<b>CTRL G</b>	Displays the current game status
<b>CTRL Q</b>	Quits the game and displays the final game status
<b>CTRL L</b>	Loads the KPSAVE file
<b>CTRL S</b>	Saves the game to the KPSAVE file
<b>1</b>	Jumps to the <i>left upper</i> zone of the map
<b>2</b>	Jumps to the <i>right upper</i> zone of the map
<b>3</b>	Jumps to the <i>left lower</i> zone of the map
<b>4</b>	Jumps to the <i>right lower</i> zone of the map

# *Kroll & Prumni*



Engage in fierce space warfare against an opposing civilization as you attempt to colonize as many planets as possible for the survival of your empire.

## Credits

- Programming: Walid Maalouli (aka vorticon)
- Sound Effects: Alan Rateliff (aka OLD CS1)
- Manual Cover & Disk Label Graphics: Ciro Barile (aka ti99iuc) from the TI-99 Italian User Group ([www.ti99iuc.it](http://www.ti99iuc.it))

## System Requirements

- TI Extended Basic. *XB 2.8 GEM is recommended for faster initial loading.*
- 32K RAM Expansion
- TIPI for mouse support
- DSSD 5 ¼" Floppy Disk drive (optional). *Using a TIPI emulated drive instead is highly recommended for faster loading.*

## Running the game

1. If using a TIPI drive, copy all the disk contents to a TIPI folder and point DSK1 to that folder using the *tipicfg* utility program in the TIPI's root folder. Otherwise, insert the game disk into the physical floppy drive.
2. Connect a generic USB mouse to the USB port of the TIPI.
3. Insert the Extended Basic cartridge into the cartridge slot then turn on the computer. Select the menu item for Extended Basic, then at the \*READY\* prompt type **RUN "DSK1.KROLL"** then press the ENTER key.
4. After a brief waiting period, the splash screen will display. Press any key to load the game which will take a few minutes.

*NOTE: while it is recommended to use real hardware for the best game experience, it is possible to run the game under emulation using the latest version of the **Classic 99** emulator which provides built-in TIPI mouse support.*

## Background

The two mighty empires of Kroll & Prumni, having already colonized and exploited all the planetary bodies in their local space, are now facing severe economic and political pressures to expand their boundaries and access the vast unexploited resources found on the planets located in the neutral zone separating the two civilizations.

For centuries now there has been an uneasy peace between the Kroll and the Prumni, but now things are about to change as the continued survival of each empire will depend on the outcome of this gathering storm with each faction amassing a vast armada poised to strike at any moment, awaiting the final attack order from its respective Emperor.

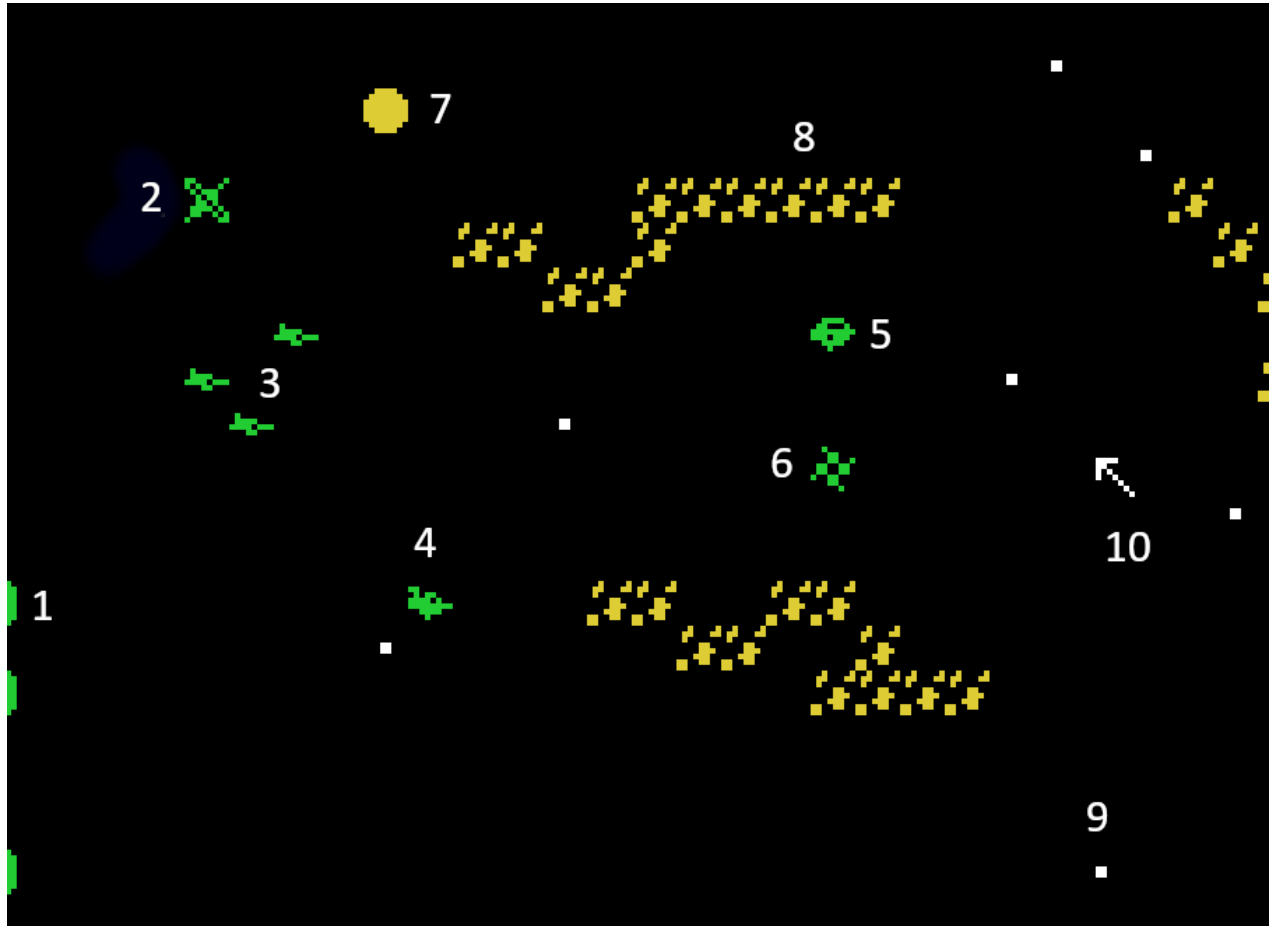
## The Protagonists

You, the human player, will control the Kroll empire with GREEN units and the computer will control the Prumni empire with RED units. Both sides will have the same type and number of units at the beginning of the game.

## Game Elements

The screenshot on the next page displays all the game elements available.

1. **Launching platform.** This is where all units first enter the game.
2. **Mobile base.** Slow moving but heavily armed, with repair facilities.
3. **Fighters.** Nimble but vulnerable, with strength in numbers.
4. **Cruiser.** Fast and armored. The prime fighting unit of the game.
5. **Transport.** Unarmed but fast. Essential for planetary colonization.
6. **Colony.** Immovable but well shielded.
7. **Planet.** The ultimate objective.
8. **Asteroid field.** Obstructs movement.
9. **Background star.** For your visual enjoyment.
10. **Mouse cursor.** Used to interact with the units on the field.

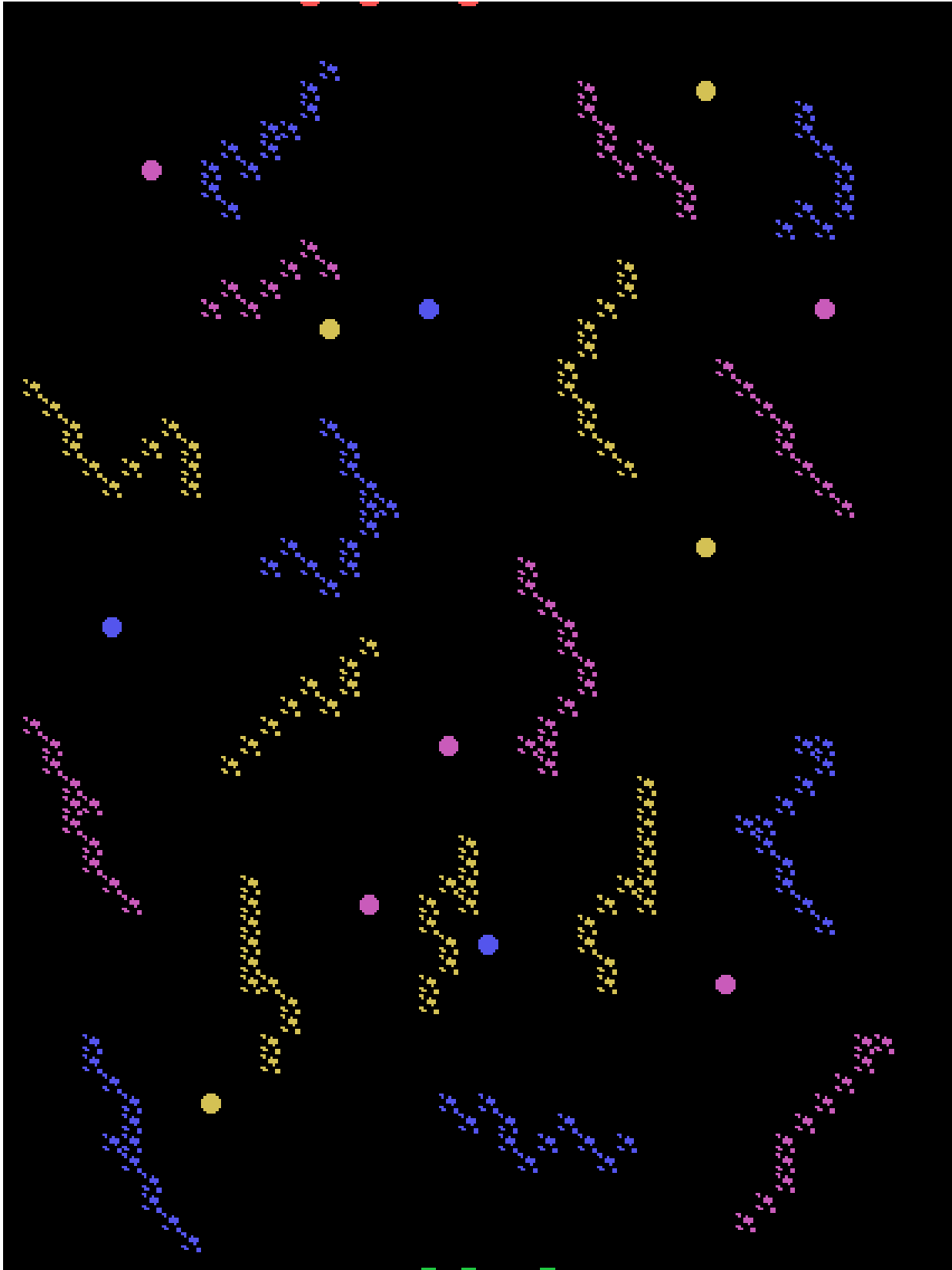


## The Universe

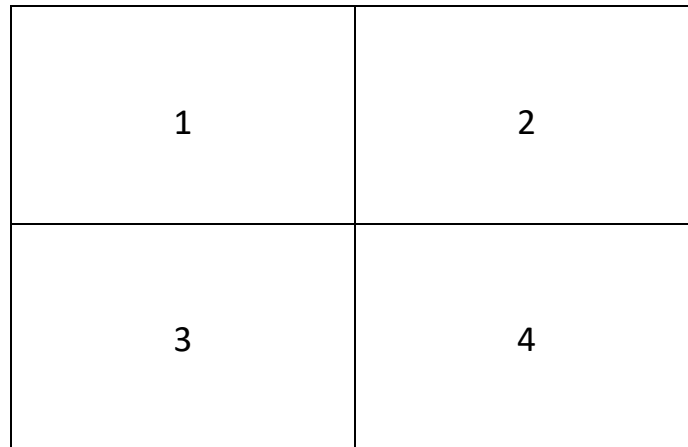
The game universe is a very strange one indeed due to severe local spacetime distortions causing the planets and asteroid fields to alternate between 3 cycles, namely the BLUE, MAGENTA and YELLOW cycles. Only planets and asteroids of the color of the currently active cycle are visible while the others are suspended in an alternate universe and cannot be interacted with.

On the plus side, the background game elements, namely planets and asteroids, are fixed in their location and always appear and disappear in the same spot, thus making space navigation a little more predictable.

On the next page you will find a map of the entire game field (flipped sideways). It will prove invaluable in planning your units' moves.



The game map occupies 4 zones, each the size of a computer screen, arranged in a square.



When the game starts, you will be in zone 1, the left upper corner of the map. To move from one zone to the other, you can either press the corresponding zone number on the keyboard or simply move your mouse cursor to one edge of the current zone and the screen will scroll in that direction.

### **Unit Characteristics**

Each unit has a set of basic characteristics:

- **Movement potential (MVT)**. This is the number of spaces the unit can move in a game turn.
- **Direction (DIR)**. The current movement direction.
- **Missiles (MIS)**. The current number of missiles available.
- **Damage (DAM)**. The number of damage points incurred by the unit

You can quickly access the characteristics of any unit by clicking on it with the mouse. A white bracket will surround the unit and a window will pop up displaying all the relevant characteristics. You can close the window by clicking on OK.





Furthermore, depending on the unit and the game phase, order options or additional information will be available. To select a specific order, click on its corresponding *first letter* which is highlighted by a green mark. Clicking on OK will return you to the game without executing any action.

You can click on enemy units as well to obtain their current status, but you will not be able to give orders to them.

### Unit Movement

Movement is *always optional*. There are 2 types of movement:

- **Conventional real space movement.** The selected unit will move within the confines of the game map up to its movement potential. For every space moved, the movement potential will decrement by 1. To access this mode, click on the **M) OVE** order and a small window will appear in one of the screen corners.



It will show the current available movement potential as well as 2 action choices:

1. **B) ACK.** You can take back your move space by space up to the original square. Each time you click on it, your movement potential increases by 1 and your unit is moved to the previous square
2. **Q) UIT.** End the unit's movement. *Any leftover movement points will be lost for that turn and the unit will not be able to move again.*

Units cannot move over other units nor stack. They cannot cross planets nor land on them. They can only cross asteroid fields between the diagonal gaps that are sometimes available. Background stars have no effect on movement.

Mobile bases and fighters can move in any direction at any time up to their maximum movement potential. This is indicated by DIR being set to 0. Cruisers and transports can only move in the currently selected direction.

A movement direction is set when the unit is first introduced into the game, and then subsequently at the end of each movement. A window will pop up prompting you to select the movement direction for the *next* move phase.



Click on the number corresponding to the desired movement direction to select it. DIR will be set accordingly. You will quickly discover that you will

need to think ahead about where you'd like your unit to move in the next turn and set its direction accordingly. You will not always be successful secondary to enemy action or a change of cycle bringing unexpected obstacles into being... You can change direction *without* moving by selecting a move order then immediately quitting movement, at which point you will be able to select a new direction.

- **Hyperspace.** This movement mode does not use the movement potential and is accessed by clicking on the **H) YPERSPACE** order. *Only transports and cruisers can use that mode.* Two conditions need to be met before entering hyperspace:
  1. The selected unit must have 0 damage.
  2. The space in the direction of the unit's current movement direction must be free of any obstacles or other units up to the entire unit's movement potential. A white targeting cursor will travel that space to verify clearance.

Once in hyperspace, a unit will be able to travel instantaneously to any part of the entire game field regardless of distance or obstructions. However, it cannot emerge from hyperspace *on the same turn it entered it.*

To exit from hyperspace, click on an empty square on the game map where you'd like your unit to emerge. A pop-up window will appear showing the number and type of friendly units currently in hyperspace.



Click on the corresponding number, assuming it is non-zero, and a unit of the appropriate type will appear on the game field. *Any unit emerging from hyperspace will have 0 movement potential and 0 missiles until the following turn*, and therefore will likely be a sitting duck for any nearby enemy unit. Keep that in mind.

After hyperspace emergence, you will be prompted to set the movement direction for the next turn as in standard movement. *A maximum of 8 units can be in hyperspace simultaneously.*

### **Planetary Colonization**

Only transport units can colonize planets. To do so, a transport vessel must first move onto an empty space *immediately adjacent* to a planet, either via standard movement or hyperspace, and then wait at least a full turn because colonies cannot be established if the unit's movement potential is not maximal.

On any subsequent turn where the chosen planet *is of the same color as the current cycle*, assuming the transport unit has not moved, click on the planet and a colony will automatically be established. The transport unit is now free to move on that same turn if desired.

One approach is to move a transport unit to the expected location of a planet even if it is not currently visible (refer to the game map as needed), wait for it to appear into the current cycle, drop a colony, then move away towards another target.

Established colonies remain visible regardless of the current cycle color but still retain the cycle color of the hosting planet. This means that they cannot be attacked unless the current cycle matches the colony's one. You can find out the cycle of any colony by clicking on it.

## Combat

Only mobile bases, cruisers and fighters have offensive capabilities. Combat between opposing units can only occur during the combat phase (see later section). Each unit can fire at as many targets as available, limited only by its missile supply for the turn.

First, a target must be selected, and this is done by clicking on any enemy unit. The latter's characteristics will be displayed, along with a targeting order. Click on **T) ARGET UNIT** if you wish to target that unit and magenta targeting bracket will appear around it. It will remain targeted until another unit is targeted subsequently.

To fire at the targeted unit, select a friendly unit which will be bracketed in white, and assuming it has at least 1 missile, click on the **F) IRE** order to fire a single missile. Your missile count will decrement by one.



If the targeted unit is hit, then an explosion will be displayed, and that unit will absorb 1 point of damage. If the missile misses, then a message stating that the missile was intercepted will pop up.

Repeat the above process for as many targets as desired.

*All units in the game can sustain up to 4 points of damage. Any additional hits will destroy them. In addition, missiles are not line-of-site weapons and therefore are not affected by any obstacles, whether units, planets, or asteroid fields as they simple maneuver around them.*

It is important to keep in mind that *all combat is simultaneous*, meaning that a unit which has sustained fatal damage will still be able to fire at its full potential during the combat phase.

A damaged unit, except for planetary colonies and mobile bases, can be gradually repaired by spending one or more turns *immediately adjacent* to a friendly mobile base. For each turn spent around a mobile base, the unit will repair 1 unit of damage and DAM will decrement by one.

### **Game Phases**

On the first game turn, you will be prompted to introduce your mobile bases, of which you only have two. Click on any empty space *within 3 spaces* of the left map edge (zones 1 or 3) and a mobile base will appear there. You do not have to use the launching platforms. *You will not be allowed to proceed with the game until you have introduced both of your mobile bases.* Make sure you do not block the launching platforms in the process. Once that is done, then you will be prompted to introduce new units and the first movement phase will start as detailed below.

The game is played over *30 turns*, each consisting of 3 phases:

- **Movement phase.** At the beginning of this phase, the current game turn and color cycle will be announced, and the appropriate planets and asteroid fields will appear on the game map.

This phase is further subdivided into a player's phase (BLUE screen border) and a computer phase (YELLOW screen border). *Movement initiative is randomized.* It is during this phase that all unit movements and planetary colonization take place.

This is also the *only* time you can introduce new units into the game. During each turn, you are allowed to enter either 1 cruiser, 1 transport or a single fighter squadron, assuming you have a corresponding unit available for deployment. First click on one of the three platforms which does not have any blocking unit directly in front of it, and a list of available units will pop up.



Next click on the icon of the desired unit and it will be placed immediately in front of the selected platform. From there it will be free to move as usual. Please note that fighters are always introduced as a 3-fighter squadron, but you can move each individual fighter separately once placed on the game field.

When you have finished all your desired moves, press **CTRL X** to end your phase, at which point the computer will initiate its own movement phase if it did not have the initiative, otherwise the combat phase will load.

- **Combat phase.** Here again, we have a player's phase (RED screen border) and a computer phase (YELLOW screen border). The player always goes first followed by the computer but remember that combat is considered *simultaneous* as mentioned previously. Press **CTRL X** to end your side of the combat.
- **Administrative phase.** During that phase, the screen border will turn to GRAY and the computer will cycle through all the units on the field. Any unit with 5 or more damage points will be destroyed and permanently removed from the game. Furthermore, any unit which occupies a space where either a planet or an asteroid field is expected to appear on the *next turn* will also be destroyed. Needless to say, you have to be very careful with your unit placement, using the provided game map as a guide.

Finally, all surviving units will be replenished with their respective full missile complement and maximal movement potential, ready for another round.

At the end of this phase, the game turn number will increment by 1 and the next movement phase will load.

### **Saving and Loading**

At any time during the player's movement phase, you have the option to save the current game to disk. Press **CTRL S** and the game will be saved to DSK1 under the filename of KPSAVE. This process takes about 5 minutes, following which game play may resume where it left off. If you wish to archive various save states, simply rename KPSAVE to any other filename of your choosing.

To load a previously saved game, press **CTRL L** at any time during the player's movement phase and the file KPSAVE will be loaded from DSK1. It will again take about 5 minutes to load, at which point the game will resume in the exact state it



was saved from. If you wish to load a different game file, rename that file to KPSAVE before loading.

### **Victory Condition**

The objective of the game is to colonize more planets than your opponent. At the end of 30 turns, the game will tally each side's colonies, assign 5 points for each colony, then subtract any damage points sustained by each of the colonies from the total. The winner of the game is the side who has the most points.

At any time during the player's movement phase, a current point status can be obtained by pressing **CTRL G**. The screen border will turn GREEN, and the game will pause until you click OK.



If you wish to quit the game early, press **CTRL Q** and a final game status summary screen will be displayed. Pressing OK will exit the game and you will be back into the Extended Basic environment.

If you wish to restart the game, it is advised to power cycle the computer to ensure that all the RAM had been erased. Otherwise, you might experience erratic behavior.

## Programming Notes

This game was developed in Extended Basic with assembly language support for data storage and support routines. It is a fairly complex game spanning 3 separate XB programs linked together.

Given the speed limitations of XB, and despite the assembly language support, the game AI runs rather slowly, with a “cogitation” time per phase between 5 and 7 minutes depending on the number of units on the game field. While this is very much in line with standard human-controlled board wargames as players ponder their actions, it will likely only suit a minority of computer gamers leaning more towards thinking games as compared to fast action arcade-style ones.

As with any retrocomputing project, I programmed this game primarily for my own edification and entertainment, finally fulfilling a long-standing desire to convert the original Kroll & Prumni board game to a computerized version. And if a few players manage to draw some enjoyment out of it, then that would be the proverbial icing on the cake.

The development of this game would have been much more difficult without the availability of these outstanding programming utilities

- **TICodEd.** A complete IDE and translator for programming in TI BASIC and XB with advanced language facilities
- **Classic 99 emulator.** A comprehensive emulator with built-in TIPI mouse support
- **STEVIE.** An advanced native text editor for real hardware development

Walid Maalouli  
October 2022

# Kroll & Prumni

Computer Adaptation  
by *Walid Maalouli*

The two space civilizations of the **Kroll** and **Prumni** are facing severe economic and political pressures to expand their empires via planetary colonization, and now they have clashed.

The goal in the game is to conquer as many planets as possible while engaging the enemy fleet in battle.



**KROLL**



**PRUMNI**

Will you become the next Master of the Universe?