A Player's Guide To

EMPIRE

WORLD BUILDERS™

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EMPIRE I: WORLD BUILDERS VERSION 1.0

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ACKNOWLEDGEMENTS

WORLD BUILDERS was developed exclusively by Edu-Ware Services, Inc., a California software development company dedicated to the production of instructionally valid C.A.I. and intellectually challenging games.

It took the efforts of a number of individuals to bring this product to fruition:

<u>David Mullich</u> designed and coded the entire set of programs, developed the Interactive Fantasies high-resolution graphics system, and authored this Player's Manual.

Sherwin Steffin served as Project Manager throughout the design and development of WORLD BUILDERS.

Steven Pederson developed the history of the Empire and authored The Birth of a Free Empire.

Robert McNally served as primary playtester and contributed a number of valuable playability suggestions.

Steven Barr conducted additional testing.

I. INTRODUCTION

WORLD BUILDERS is the first component of the EMPIRE GAMING TRILOGY, to be completed by INTERSTELLAR SHARKS and ARMAGEDDON. Set in the space age of a civilization parallel to our own, WORLD BUILDERS chronicles the infancy of the Galactic Empire. It is a time when the more adventurous individualists abandoned their strife-ridden home planet to seek their fortunes amongst the stars.

The concept behind WORLD BUILDERS is similar to that of the many science-fiction/fantasy role-playing games that are popular today. As a player who is sharing in the experiences of a citizen of the Empire, you are to generate a character defined by various attributes which provide channels for your control over the game. Dependent upon your character's senses for gathering information, strength and dexterity for manipulating objects, and charisma and psionics for influencing others, you must assume the identity of the character that you are portraying throughout the game session.

Based upon the inherent attributes of your character, you may then choose among three possible career paths: miner, missionary, or homesteader. Strength, dexterity, and senses are the hallmarks of the miner, who must spend his life hopping from planet to planet to seek whatever subterranean treasures he can unearth. The missionary must use intelligence, charisma, and psionics to gain the trust of his followers and rise up through the religious hierarchy. The homesteader's life demands speed, dexterity, and strength to coax agricultural wealth from his adopted alien home. Once chosen, the character must follow his career path for the rest of his or her life until such time as an opportunity arises to change that career path to another.

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Time, too, is an important aspect in the play of the game. Characters enter the game at the age of eighteen either before or after the formation of the Empire. and their basic attributes are recorded upon the game diskette so that they may be played again and again. However, as the character is played, his attributes may deteriorate with time, while no character will be permitted into space past age two hundred. Major events such as interstellar migration or setting up a life on a farm will cost a character large segments of his lifespan, while the daily routines of eating and drinking must be repeated at regular intervals. Finally, through age, accident, or carelessness, the time will eventually come when each character will die, its attributes being erased from disk storage forever.

WORLD BUILDERS is a simulation of the struggle to build a life in a hostile extraterrestrial environment in which you, the player, assume the body of the character that you wish to portray. Here is your opportunity to participate in the birth of an Empire, whether you wish to be a driving force in colonial expansion, or a frontiersman on the periphery of civilization. Your tasks are to discover a new way of life for each of your characters, gain a foothold in an alien environment, and conquer the most exciting frontiers of all.

II. PLAYING THE GAME

WORLD BUILDERS may be played upon any Apple computer equipped with 48K of memory, ROM Applesoft, and DOS 3.3. Simply insert the WORLD BUILDERS diskette into your drive, close the drive door, and turn on the power switch. After approximately thirty seconds of disk activity, you will see the INTERACTIVE FANTASIES logo page, the WORLD BUILDERS title page, and finally the game proper.

Although this is the greatest waiting time that you will experience, WORLD BUILDERS remains a highly disk intensive game. Under no circumstances should you open the disk drive door while the busy light is on, even if you are attempting to prevent the death of a valued character, for you run the risk of damaging the game diskette and rendering it unusable. Since characters are saved upon the diskette for later use, you should NOT place a write-protect tab over the diskette's write-protect slot.

The game proper is distinguished by a display of four windows outlined in purple bordering. The topmost and largest window provides you with graphic information. For most of the game, it contains the world as seen through the eyes of the character, although at other times it more appropriately shows the point of view of an invisible third party or an abstract interpretation of events. Beneath the large window is a smaller one for transmitting messages to you, the player, Below that is an area for displaying die rolls and a window for typing in player commands. All the second

Controlling the actions of the character is accomplished by the use of WORLD BUILDERS' vocabulary of more than 180 words categorized into verbs (e.g., TRAVEL, FIGHT, USE, LOOK), adjectives (e.g., NORTH, LEFT. NO), and objects (e.g., SWORD, FOOD, LAMP). Furthermore, many words have synonyms (e.g., GO, MOVE, and TRAVEL) or abbreviations (NORTH and N). Commands to the character may be given in any order with words not in the vocabulary being ignored, and lastmost words of any given category having precedence.

Words of greater importance at one point in the game may not necessarily be used at another. Using a word that is not implemented at that point in the game will WORLD BUILDERS

generate the response "THAT WORD IS NOT USED NOW." If your commands do not contain any recognizable word, the response "REPHRASE YOUR COMMAND" will be given.

A complete vocabulary list is given elsewhere in this guide.

III. THE NY ROCKET FIELD

Description

WORLD BUILDERS starts and ends here, at the NY Rocket Field, a spaceport upon the Empire's home world charged with the processing and transportation of colonists. From this location you may generate a character, review the status of old characters, embark on new adventures, or end the game.

Useful Words

Locomotion through the hallways and gates of the Rocket Field is achieved by the use of the commands LEFT, RIGHT, FOWARD, and BACK. Information about the surrounding environment may be obtained by using LOOK, LISTEN, WHEN, WHERE, and INVENTORY. In some situations, you may wish to leave or retrieve baggage with the commands DROP and GET, respectively.

3. The Tram Station

The Tram Station provides you with the opportunity to end the game by taking the left corridor to the Exit, or to continue play by traveling right to the Rocket Field. Once inside the Main Lobby you must further decide if you wish to be a New Colonist and generate a character or to enter the Off-Worlder gate and be a previously played colonist.

4. Generating A New Character

Taking the left door in the lobby indicates that you wish to create a new character. Since only nine characters may exist at any one time, you will be bodily thrown out if this limit has been reached.

Generating a character consists of making a series of simulated "die rolls" to determine the values of the attributes that make up a character. All new colonists come into the game at age eighteen, but they may be either male or female, this being your first die roll. Next, ten basic attributes ranging in value from three to eighteen with ten as the average are established:

- * Dexterity: Physical coordination and the ability to do manual tasks.
- * Constitution: The power to withstand injury, disease, deprivation of food and water, and other forms of physical hardships.
- * Strength: The ability to lift, carry, and move objects against the pull of gravity.
- * Aim: Skill in sending a projectile toward its chosen target.
- * Senses: A general measure of the ability to perceive the environment through the five primary senses: sight, hearing, smell, taste, and touch.
- * Intelligence: A measure of the mental facilties and memory recall of the character.
- * Charisma: The special quaility which permits individuals to influence the action of others.

- * Willpower: The ability to withstand temptation to act otherwise.
- * Speed: The amount of motion a body can make in any given segment of time.
- * Psionics: The power determining the success of communicating with animals, playing games of chance, and contacting supernatural beings.

Having generated the above attributes, the player must then select the career path which best suits the character. The Colonial Authority will then bestow possessions upon the character to get him or her started: the miner receives a lamp, a shovel, and 5000 credits (the monetary unit); the missionary is given five charms, five amulets, and 500 credits; and the homesteader is granted a mule, an axle, a wagon, a water tester, one hundred bags of seed, and 20000 credits. In addition, ALL characters are given a knife, ten cans of rations, ten cans of water, a respirator, a vacsuit, and twenty airtanks.

Finally, you must give the character a name of less than fifteen alphabetic characters. No two living characters may possess the same name.

5. Playing A Stored Character

By taking the right gate at the lobby, you are indicating that you wish to play a previously stored character. If no characters currently exist, you will receive the message "NO COLONISTS HAVE RETURNED TO PLANET" and be sent back to the lobby. To choose a character, simply enter the number corresponding to the name of the character that you wish to play.

6. The Examining Room

In the examining room you are given the current values

of your characters attributes. Remember that the attributes will deteriorate with age. Also listed is the status of sections of the characters body, green indicating health and red signifying loss of that limb. A character may be barred at this point from being played again if a limb is missing or the age is too great. If either is the case, the character will be eliminated and his possessions passed on to an heir, if any.

7. Customs

Before entering the boarding gate, your character's possessions (except minerals) will be checked against weight restrictions. If the baggage exceeds the maximum weight, you will be required to leave some behind. Otherwise, you may pass on and enter the boarding gate to the left.

.IV. INTERPLANETARY FLIGHT

Description

The technology at the time of the formation of the Empire permits interplanetary travel with flight time of one to six weeks, depending upon the distance of the next planet on the flight plan. Since rocket ships of this capability are enormously costly to operate, they are wholly owned and operated by the Colonial Authority and carry hundreds of colonists within their holds. For the colonist, the experience is much like that of riding a terrestrial bus: his only concern is to determine at which point along the rocket's flight would he like to disembark.

2. Useful Commands

Your control over the rocket ship involves the starting and stopping of the vehicle rather than determining its direction. The word SEARCH signifies that you wish to travel to the next planet along the ship's flight plan. LAND permits the ship to land upon the planet that it is currently orbiting. Its converse is LIFT, taking you from the surface of the planet and placing you into orbit. HOME returns you to the Empire's home world. OUT indicates that you wish to leave the rocket ship whether you are on a planet or in space.

Special breathing apparatus is required when stepping on planets with an unbreathable atmosphere or in the event that the ship is losing cabin pressure, signaled by the Atmosphere Status Light changing from green to red. A RESPIRATOR is required on planets with a thin atmosphere. All other unbreathable environments require a VACSUIT, which uses one (air) TANK per twenty-four hour period. The commands WEAR and OFF put on and take off, respectively, the specified gear.

3. Planetary Data

When your ship enters a parking orbit around a planet, the viewport will change to show a computer read-out with the following information:

- * Diameter: Ranging in value from one to thirteen, this determines the relative area of the planet's surface.
- * Density: Ranging in value from one to fourteen, this information directly correlates with the mineral wealth of the planet.

- * Gravity: This value is determined by the diameter and density and is scaled to be shown as relative to the home world's gravitational acceleration.
- * Atmosphere: None, Trace, Corrosive, and Insideous atmospheres require the use of VACSUITs and TANKs. Additionally, Insideous environments tend to dissolve electronic gear. A RESPIRATOR is required with Thin atmospheres, while Medium and Dense atmospheres are perfectly breathable. The latter three environments are supportive of carbon-based life and are the only types of planets along the flight paths of ships carrying missionaries and homesteaders.
- * Hydrographic: Ranging from zero to ninety in steps of ten, this value indicates the percentage of liquid water upon the planet's surface.
- * Population: This value is given in powers of ten, with 10^0 indicating that the only person on the planet will be yourself.
- * Technology: Not every world settled by colonists has decided to preserve the technology of the home world; therefore, the goods and services available to a colonist will vary from planet to planet. There exist three levels of technology on the settled worlds: ancient, medieval, and modern. Ancient technology is characterized by primitive weapons and thatched huts. More advanced is medieval technology with its blade weapons and fortresses. State of the art weapons, tools, and housing are found with modern technology.
- * Government: While the Empire was still in its infancy, the settled worlds maintained the fragmentation of political philosophies that had brought about the formation of the Empire. The anarchists decided to do without any form of governing; the giant business conglomerates formed

company planets; the power hungry opted for fuedal systems, oligarchies, and dictatorships; while the socially minded set up democracies and religious hierarchies. For the individual colonist, the various governmental forms will determine the taxes, laws, and regulations which he must confront.

V. THE PLANETARY SURFACE

Description

The surface of each planet can be thought of as two-dimensional wrap-around grid, divided into squares. These squares extend both latitudinally and longitudinally, the number in either direction being equal to the planet's diameter. Each square represents a single type of terrain, either water, beach, plain, desert, forest, hill, rough, swamp, or mountain.

The terrain square is further divided into four-by-four sections, the basic walking unit. Each time you make a movement on foot, you will move one section of one square at a time. Your ship will always be in the northwest corner of the northwest terrain square. If any towns exist within a given terrain square, it will be located in the northwest corner of that square. When traveling over the planet's surface on foot, you may find it useful to draw a map on a piece of graph paper.

Useful Commands

Traveling is accomplished with the commands NORTH, EAST, WEST, and SOUTH. To enter a ROCKET, ATV, or TOWN, you must type the word IN followed by your destination. You may enter only those destinations that are pictured upon the large window. If your

character owns a MULE and a WAGON, they will be considered to be your primary source of locomotion. Harsh terrain may injure your mule or break the wagon's AXLE. To REPAIR an axle, you will find ROPE, METALWORK, and CARPENTRY to be useful tools.

To obtain information, you may LISTEN, LOOK, SMELL, or TASTE. However, depending upon the character's senses, that information may not always be consistent. A character's sight will be enhanced if he tries to USE a set of BINOCULARS or OILLENS. He may TEST water with a TESTER, or locate his ship with a COMPASS.

Certain functions need to be repeated periodically. Every week the character must DRINK WATER; he must EAT FOOD every two weeks. To heal accumulated injuries, he may SLEEP at a cost of time and exposure to danger. His chances are improved if he tries to BUILD a SHELTER out of STICKS that he may have cut with his AXE, or use a previously purchased TENT or CABIN. Elapsed time may be determined with the DATE command.

The appropriate terrain may yield an abundance of tools and resources such as FOOD, WATER, and STICKS (wood). Animals may be hunted with the FIGHT command, minerals mined with the MINE command (providing that your character is a miner). The homesteader may start his agricultural endeavors by using the FARM command.

3. Fauna

All planets supportive of carbon-based life are a home for the following three animals:

* Heffelumps: Slow, stupid grazers. An abundant source of food, they are often herded as cattle. Training can turn them also into excellent pack animals, in which case they are called



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mules after the traditional pack animal of the frontiersmen of years past.

- * Unicorns: The same animals of Terran legend, much coveted for their horn, said to have aphrodisiac properties. Normally peaceful grazers like heffelumps, they can be quite lethal adversaries when attacked.
- * Bandersnaches: Ferocious, bipedal carnivores. The creature has often been described of as a Tyrannosaurus Rex who has had a bad day at the office. Armed with razor-like claws and armored skin, it is one of the most dangerous creatures in the known galaxy.



4. Explanation Of Symbols

Rocket



ATV



Waves



Sand Dunes



Tree



Hi 11



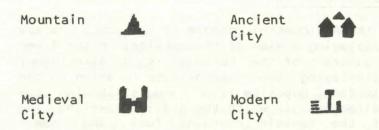
Rough



Swamp







VI. ALL TERRAIN VEHICLE (ATV)

1. Description

The ATV is a fast moving craft with the capability of travel over all terrain (including water), but with a cost of poor maneuverability. Armed with a laser cannon to expose valuable minerals contained within the ground and having an airtight, pressurized cabin, it is the ideal tool for the mineral seeking miner. An ATV is supplied to each miner, upon touch down on a planet surface, by United Ores, Incorporated, but they may be purchased by others at a livery on modern technology planets. However, Colonial Authority ships will not transport ATVs to other planets.

2. Useful Commands

The command DRIVE is used to start up the ATV and access its control panel. The laser cannon, which uses one hundred gallons of fuel per shot, is fired with the command FIRE. Should the ATV break down, you may REPAIR it with METALWORK or ELECTRONIC tools. You may exit the vehicle by typing the word OUT.

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3. The Control Console

On top of the ATV control console is a long, narrow window displaying a view of the outside. In the lower left-hand quadrant of the console is a directional locater displaying your approximate location on the planet's surface. Opposite is a compass showing the current direction in which the ATV is traveling. The center of the console contains fuel and speed indicators, operating instructions, and the like.

Once the DRIVE command is given, the vehicle's engine is ignited and the console becomes accessible with single keystrokes. The keys 1,2,3,4, and 5 determine the vehicle's speed. At lower speeds difficult terrain may cause the vehicle to rock back and forth or to roll backwards. Higher speeds consume more fuel, make stopping more difficult, and increase the chances of engine failure. Steering is accomplished with the [LEFT ARROW] and [RIGHT ARROW] keys to turn the vehicle towards the left or right much like a steering wheel, and the [B] key is used to bring the ATV to a halt. Type DRIVE to restart ATV.

VII. TOWNS

Description

A source of supplies and administrative facilities, towns are found on planets with thin to dense atmospheres. Always located in the northwest corner of the terrain square they occupy, their number is proportional to the planet's population. You may enter a town only if you can see it on the large window and use the command IN TOWN.

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2. Useful Commands

Walking through a town is done with the commands NORTH, SOUTH, EAST, WEST, LEFT, RIGHT, FORWARD, BACK. The IN and LEAVE commands are for entering and leaving a building, respectively.

Many commands applicable to a town involve the acquiring and relinquishing of possessions: GET, DROP, GIVE, REQUEST, STEAL, BUY, SELL. Under some governmental systems, a PURCHASING or WEAPONS license may be required to perform the last two functions, although you can always attempt to BRIBE a merchant. A miner will wish to ASSESS his minerals at a Company Store, and the more venturesome may try to GAMBLE at a Casino.

Buildings

Every town consists of a four-by-four set of buildings. The area is completely wrap-around, save for the northern border, which contains the town boundry. Nine different buildings may be found there:

- * Armory: A storehouse and seller of weapons and armor. A WEAPONS license as well as a PURCHASING license may be required to do business here.
- * Company Store: Owned and operated by United Ores, Inc., it is found only on company planets or those with modern technology. Here mining supplies and environmental gear may be purchased and minerals assessed.
- * Feed Store: A place to purchase farm supplies.
- * General Store: A store offering basic tools and survival gear.

- * Livery: A stable selling mules, wagons, and axles. With modern technology, it also offers ATVs and fuel.
- * Church: A source of information and, in religious governments, charms and amulets. All established churches worship The Lord of Light.
- * Town Hall: Found only on planets with a governmental system, it is a source of information. If it represents a bureaucratic government, it will sell Purchasing, Hunting, and Weapons licenses.
- * Park: Not a building, but a section of parkland. Here the missionary may practice his faith by using the command PREACH.
- * Casino: An evil place offering food, drink, and games of chance.

VIII. NON-PLAYER CHARACTERS

1. Description

While walking through terrain or in a town, your character may encounter other humans not under the control of you, the player. Like player characters, they possess attributes, weapons, armor, supplies. They may be friendly, indifferent, or hostile; attempt to offer something to you freely or at a price; or desire to take something away from you. Often their actions may be influenced by your treatment of other characters in previous encounters.

2. Useful Commands

LOOK and WHO are useful in obtaining information about the character you are confronting. WHO and YES can

serve to initiate conversation, while FIGHT and the like will put you into a combat situation, the first move being yours. Questions may need only a YES or NO answer, and most requests for money require the response of GIVE MONEY. Other commands of special interest are STEAL, REQUEST, LOAD, and LEAVE.

3. Character Types

There are ten different types of characters which you may confront, none of which may be assumed to be necessarily friendly or hostile:

* Peasant: One of the masses, typically poor, ignorant, and suppressed by some authority.



* Worker: A farmer or miner of the more successful working class who may or may not be self-employed. This is the only character that you will meet on an airless world, in which case he is assumed to be a miner like yourself.



* Bandit: One who lives off the earnings of others (though not through a state-run welfare system). He may, however, justify his actions with some cause.



* Soldier: A member of the planetary militia, constabulary, or internal revenue service; an enforcer of laws, regulations, and taxes. On planets with no government, he may be considered to be a hired mercenary.





- * Hunter: A member of the lower caste who lives off of wild game. He may be highly protective of his territory.
- 帝
- * Vigilante: A self-appointed pursuer of those he considers to be evil-doers.



* Merchant: A salesman offering goods in exchange for money.



* Trader: A salesman offering goods in exchange for other goods.



* Noble: A member of the ruling class or bureaucracy, or wealthy.



* Missionary: A member of the planet's religious system. On planets that have religious governments, he may serve the same function as a soldier.



IX. COMBAT

Description

Combat may be initiated by player or non-player characters, including animals. During combat, each player may make a number of moves equal to his strength plus his dexterity, divided by ten and rounded up. The player initiating combat is permitted the first series of moves.

When combat commences, the large window changes to show the point of view of an invisible audience. The player character is shown to the left and the non-player character is on the right. Above each is the character's name, the weapons and armor that he is currently using (natural weapons and armor of animals are not listed), and the wounds currently sustained on various points of the body. Injuries sustained on the limbs that equal half the constitution rounded up will cause the loss of that limb. A missing arm will decrease the characters dexterity by half: a missing leg decreases speed. Characters are always able to manipulate objects and travel, however. Death occurs when the injuries in the torso equal the constitution. or injuries in the head equal half the constitution rounded down.

Success in any agressive move is determined by the die roll being greater than or equal to the value of the relevant attribute subtracted from twenty. A die roll of twenty made by the player character only will cause the immediate death of the non-player character. A roll of one by either character will be considered a fumble resulting in a loss of turn, position, weapon, etc. Non-player character's rolls are invisible to the player.

If you are successful in killing your opponent, you will be able to loot the body.

Useful Commands

A player possessing a PISTOL or RIFLE will find the commands SHOOT and LOAD most applicable for combat. Blade weapons and ROPE whips are associated with the command SWING. A player may THROW a SPEAR or other possession, but he may first want to AIM a particular weapon at a LEG, ARM, TORSO, or HEAD before using it. Players without weapons may wish to HIT or KICK their opponents.

Many weapons such as blades require the characters to be in close contact with each other. Movement is achieved with LEFT, RIGHT, FORWARD, and BACK. You may attempt to escape by typing LEAVE, although the action will cost you a move if you are unsuccessful.

Other useful commands during combat are GET, LOOK, WEAR, and INVENTORY.

X. MINING

1. Description

Mining may be carried out by miners who give the command MINE while traveling upon the planet's surface. While the character is engaged in mining, the large window shows a cut-away view of the planet's crust and the position of your character. The miner must dig his way into the planet's surface to find veins of the one particular mineral indigenous to the terrain square he is mining.

The miner spends most of his life searching for mineral veins rather than mining them, for the more valuable minerals are found only on denser planets. Only one type of mineral can be found in any given terrain square, and minerals are more plentiful the deeper underground that you mine. Veins, once they are found, may run out after only a few units of minerals are uncovered. Then the miner must find a Company Store in which to ASSESS his finds, exchanging them for money. The minerals, in order of value, are tin, copper, aluminum, iron, silver, crystal, alloys (two or more special metals fused together beneath the

surface of some planets), gems, and uranium. The white rocks occasionally found by some miners are of no value to the Empire.

Mining is a dangerous endeavor. Pockets of explosive and poisonous gas may exist under the surface. Excavations may open up a subterranean water supply and flood the cavern, drowning the character. While more abundant mineral supplies can be found in deeper levels, cave—ins, too, will be more frequent. The miner may lose his light source or air supply, or a cave—in may close down his escape route, leaving him in a dilemma that only The Lord Of Light can solve.

2. Useful Commands

Movement above, within, and into the planetary surface is accomplished with the commands LEFT, RIGHT, FORWARD, BACK, UP and DOWN. Information about the subterranean environment is obtained with a LOOK, LISTEN, or SMELL. You may also wish to USE a metal DETECTOR or GEIGER counter if you own one.

Once a mineral vein is found, mining is commenced by typing MINE and requires either a SHOVEL, AXE, or DRILL (listed in increasing order of effectiveness). For your light source, you may wish to MAKE a TORCH with a STICK, or LIGHT a LAMP or ELECTORCH. Other useful commands are INVENTORY and LEAVE.

XI. PREACHING

1. Description

Only a missionary in a park may PREACH. Having done so, he will see a temple belonging to one of the three pre-Empire religions or the one post-Empire religion.

The missionary's objective is to determine what actions and responses are appropriate for rising up in the hierarchy of the religion of his audience. Periodically, tests will be administered to your missionary character. If he succeeds, he will advance in status, but if he fails, he may be assassinated or stoned to death.

The successful missionary will see his audience grow in number. When he decides to LEAVE his pulpit, he will collect donations proportional to the number in the congregation. A missionary can not become a master of any religious sect without attempting to administer the faith to that sect at least twice. Once he has become a master of all three pre-Empire religions or of the post-Empire religion, he will be given the greatest tests and rewards of all.

2. Useful Commands

Since the object of this portion of WORLD BUILDERS is to determine which actions are appropriate, only a few of the more important commands implemented are listed here. In every religion the word PREACH is important, as well as is the USE of CHARMs and AMULETS. LISTEN, LOOK, and SMELL can provide crucial information about what to do. But when you have finished for the day, you may LEAVE.

XII. HOMESTEADING

1. Description

The homesteader begins his life on the soil by giving the command FARM, while on the planetary surface. He will first be given an opportunity to take a spouse from among the other characters of the opposite sex,

for tasks on the farm get done more quickly and efficiently with more hands to help. The homesteader is also well advised to begin farming with plenty of food, water, seed, at least two mules, and some form of shelter.

It is the homesteader's task to determine how and when to best rotate the crops and animal herds, which fertilize the soil. He must determine, based upon the rotation of the planet (which is directly proportional to the diameter), when the rains will come and the influenza season starts. The homesteader must learn to judiciously use his seed and divide the harvest amongst family and cattle. He must develop his timing so that he is not plowing one field while another is ready to be harvested, giving stray heffelumps a chance to come in and eat the crop.

The primary window shows a layout of the homesteader's land, which is divided into four fields: NORTH, SOUTH, EAST, and WEST. The display indicates whether a field contains herds and their relative number, or if it is plowed, seeded, or ready for harvesting. It also shows any stray animals that may be feasting upon a field full of crop.

2. Useful Commands

Most commands listed here take several weeks of game time to implement, so the homesteader must be careful about the order in which he issues them. He may HERD his animals into one field to fertilize that section at a risk of losing some cattle, PLOW a field to improve the soil at a large cost of time, SEED a field at a cost of seed to produce a harvest, HARVEST a field, CAPTURE a stray heffelump, KILL cattle for food. All of these commands require the direction of the field desired.

The homesteader must also DRILL for water, make INVENTORY reports, MATE to increase the size of his family, and keep track of the DATE. And when the homesteaders decide to LEAVE, their goods are scaled down by a factor of ten, divided amongst the two spouses, and the character is then free to sell his goods back to the relevant store.

XIII. VOCABULARY LIST

1. Movement

GO, MOVE, TRAVEL: Movement verbs usually requiring a directional adjective in accompaniment.

WALK, RUN: See above.

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LEAVE: Verb used to leave a building, end an involvement with another character, or to stop conducting a career activity.

NORTH, N: Directional adjective.

SOUTH, S: See above.

EAST, E: See above.

WEST. W: See above.

LEFT, L: See above.

RIGHT, R: See above.

FORWARD, AHEAD, F: See above.

BACK, BEHIND, B: See above.

IN: Used to enter a building, town, rocket, ATV.

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OUT: Used to exit the above mentioned places.

HOME: Return to the start of the game from the rocket ship or planetary surface.

MULE: Domesticated heffelump used for cattle and as a pack animal, named after the traditional pack animals of pioneers of old.

WAGON: Device that allows you to have more possessions than gravity would normally allow.

AXLE: A crucial component to the wagon that tends to break.

ATV: Fast moving, slow maneuvering All Terrain Vehicle. It is supplied free to miners and can be bought by others.

FUEL: Required to drive ATV or to fire its laser cannon.

TOWN, CITY: Preceded by the word IN, this command allows you to enter a town appearing upon the screen.

2. Survival needs

EAT, TASTE: Consume two week's worth of food.

DRINK: Consume one week's worth of water.

TEST: Test drinkability of water. Requires a water testing kit.

SLEEP, REST: Takes up eight hours of time plus one hour for healing each wound (only one per body section at any one time).

WEAR, ON, DRESS: Put on specified environmental gear or protective armor.

OFF, UNDRESS: Take off the above mentioned gear.

MAKE, BUILD, FIX, REPAIR: Make or repair the specified object.

USE, WORK, TRY: Use the specified object.

VACSUIT: Environmental gear required for trace, corrosive, insideous, and no atmosphere. Uses one airtank per day.

TANK: Air canister required for use with vacsuits.

RESPIRATOR: Environmental gear required for thin atmospheres.

WATER: Required every week. May be bought or found.

TESTER: Device for testing the drinkability of water.

FOOD, RATIONS: Required every two weeks. May be found, bought, or hunted.

SHELTER: Something one must BUILD out of STICKs.

TENT: A very fragile form of shelter.

CABIN: A collapsible, protective form of shelter.

STICK: Used as a weapon or for making shelter, torches, or repairs.

AXE: Used as a weapon, for cutting sticks, and in mining.

PULLEY: Can be used to haul rocks in a cave-in.

ROPE: Can be used to haul rocks or repair an axle.

CARPENTRY tools: Used to repair an axle.

METALWORK tools: Used to repair an ATV or axle.

ELECTRONIC tools: Used to repair an ATV.

Information Gathering

LISTEN, HEAR: Success depends on senses.

LOOK: See above.

SMELL: See above.

WHERE: Acquire specified information.

WHO: See above.

WHEN: See above.

INVENTORY, INV: Produce a list of the character's possessions.

DATE: Determine current time and date.

YES, OKAY, Y: A response to a question.

NO: See above.

COMPASS: Used to determine direction of rocket ship.

BINOCULARS: Used to increase vision.

OILLENS: Used to greatly increase vision.

GET, TAKE, GRAB, FETCH: Acquire one, of a possession that is within your reach.

DROP, RID: Drop all of the specified possession (but you can get only one back).

BUY: Purchase a possession from a store or merchant.

SELL: Sell to above.

GIVE: Give a possession to another character.

REQUEST. ASK: Request from above.

STEAL, ROB: Steal from above.

BRIBE: Attempt to get around red tape with greenbacks.

GAMBLE: Play slot machine at casino.

ASSESS: Turn minerals into money at Company store.

PURCHASING: License required to buy and sell anything.

WEAPONS: The above as applied only to weapons.

HUNTING: License required to kill animals.

MONEY, CREDIT: The Empire monetary unit.

5. Combat

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ATTACK, KILL, FIGHT, HUNT: Initiate combat.

SWING, PARRY, CUT, STAB, CHOP: Use a blade weapon or whip at close range.

THROW, FLING, HURL: Throw a spear or other projectile.

SHOOT, FIRE: Use a gunpowder weapon or laser cannon.

LOAD: Place one bullet in rifle or up to six in pistol.

HIT, PUNCH, SLAP, SLUG: Use your fists as a weapon.

KICK: Use your feet as a weapon.

AIM: Must be followed by a body location.

HEAD: Body location.

TORSO: See above.

LEG: See above.

ARM: See above.

SPEAR: Throwing weapon.

KNIFE: Blade weapon.

FOIL: See above.

CUTLASS: See above.

BROADSWORD, SWORD: See above.

PISTOL: Gunpowder weapon using six bullets.

RIFLE: Gunpowder weapon using one bullet.

BULLET: Required for gunpowder weapons.

SIGHT: Used with gunpowder weapons.

LEATHER: Primitive protective gear against blade weapons.

MESH: Steel rings serving as good protection against blade weapons.

ABSORBTION suit: Absorbs impact of gunpowder weapons.

6. Interplanetary travel

ROCKET, SHIP: The Colonial Authority owned spacecraft.

SEARCH: Orbit about a new planet. anoldsoof your idade

LAND: Take ship from orbit to planet surface.

LIFT, SPACE: Take ship from surface to orbit.

HOME: Return to home planet.

7. Mining

MINE: Initiate mining on planet surface or mine for minerals while underground.

TORCH: Primitive device for producing light. Made from sticks.

LAMP: Device for producing light.

ELECTORCH: Advanced version of above.

SHOVEL: Simple mining tool.

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DRILL: Advanced mining tool.

DETECTOR: Device for detecting the presence of metal.

GEIGER counter: Device for detecting the presence of uranium.

8. Preaching

PREACH, CONVERT: Perform missionary duties in town park.

AMULET: Device for warding off evil spirits. Destroyed when used.

CHARM: Device for attracting good fortune. Destroyed when used.

9. Homesteading to this sale and all the sale and all the

SETTLE, FARM: Settle on planet surface.

PLOW: Device for and action of plowing.

SEED: Substance for and action of planting.

HERD: Move cattle to specified field.

HARVEST: Yield crop from specified field.

CAPTURE: Capture stray heffelumps as cattle.

MATE: Produce offspring.

10. Miscellaneous

RESCUE: Save someone in distress.

EMPIRE, EMPEROR: A reference to The Apex.

LORD: A reference to The Lord Of Light.

XIV. ERROR HANDLING

However advanced this computer technology may look, we are still in the dark ages when it comes to reliability of programs and the magnetic media on which they are stored.

For whatever small comfort it may bring, we have installed some error reporting systems that will at least tell you what has gone wrong and where the problem occurred. Below is a list of explanations of the error codes and what, if anything, you the user can do to fix the problem:

Codes 0, 2, 3, 11, 12, 13, 15, 16, 22, 42, 53, 69, 90, 107, 120, 133, 163, 176, 191, and 224: programming error. If any of these error codes appear, return your diskette or contact us by phone. Please indicate where the error was reported to have occurred and what operation you were performing at the time so that we may diagnose and correct the problem.

Code 1: ROM Applesoft is not resident in your machine. WORLD BUILDERS requires ROM Applesoft to be present.

Code 4: There is a write-protect tab on your diskette. Simply remove the tab and begin the game anew.

Codes 5 and 8: Your copy of WORLD BUILDERS is defective. Please return your disk for a new copy.

Code 6: Either the WORLD BUILDERS diskette is not in your drive, or you have DELETEd accidentally or intentionally a file from the diskette.

Code 7: The WORLD BUILDERS diskette is not in your drive.

Code 9: Either the WORLD BUILDERS diskette is not in your drive or you have been storing your own files onto the diskette. Do not use the diskette for anything other than playing WORLD BUILDERS.

Code 77: Your machine does not have 48K of memory. If that is not truly the problem, try rebooting your diskette.

WARNINGS

- * At no point during the game should you leave the disk drive door open, not even to save a valued character from death. Doing so may cause damage to your character files and render your WORLD BUILDERS diskette unusable.
- * Do not bother to put a write-protect tab on your diskette.
- * Do not use the WORLD BUILDERS diskette for any purpose other than playing the game.

* The Control-C interrupt has been disabled. Attempting to halt the game by typing Control-C may cause the game to halt, garbage to appear on the screen, or produce one of the error codes.

Edu-Ware Services Inc. is constantly updating and improving its line of products. We invite you to contact us about any difficulties you may experience, or with any innovative applications you make of the programs. We look forward to hearing from you.

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