

<b><u>DESIGN</u></b> .....	<b>2</b>	<b>STARTING THE GAME</b> .....	<b>19</b>
<b>INTRODUCTION</b> .....	<b>2</b>	SPAWNING .....	19
GAME INFO .....	2	<b>ENDING THE GAME</b> .....	<b>19</b>
MISSION STATEMENT .....	2	DEATH.....	19
GAME SUMMARY .....	2	WINNING.....	19
KEY POINTS .....	3	LOSING .....	19
<b>GAME SETUP</b> .....	<b>3</b>	QUITTING .....	19
FLOW .....	3	<b>HUD</b> .....	<b>20</b>
STRUCTURE .....	4	GAME HUD.....	20
NO WAITING .....	4	MINI-MAP .....	20
<b>PLAY MODES</b> .....	<b>5</b>	TEXT RECOGNITION .....	21
TEAM PLAYER .....	5	<b>ENVIRONMENT</b> .....	<b>21</b>
GAMEMASTER .....	6	BACKGROUNDS.....	21
<b>CHARACTERS</b> .....	<b>6</b>	TERRAIN.....	21
PILOTS.....	6	HAZARDS .....	21
ROBOTS .....	7	THEMES .....	21
<b>AI CHARACTERS</b> .....	<b>8</b>	<b>OBJECTS</b> .....	<b>22</b>
SPIDER .....	8	PLAYER ACTIVATED.....	22
MX-03 SHOCK TROOPER.....	8	AUTO ACTIVATED .....	23
<b>GAMEPLAY</b> .....	<b>9</b>	<b><u>REFERENCE</u></b> .....	<b>24</b>
ATTRIBUTES.....	9	<b>CODE</b> .....	<b>24</b>
INTERACTION .....	10	OFFSETS .....	24
CONTROL .....	11	HEIRARCHY RULES .....	24
MOVING.....	11	<b>ART</b> .....	<b>25</b>
FIGHTING .....	11	ANIMATION .....	25
DAMAGE.....	12	PRODUCTION RULES.....	25
TRANSFORMING.....	12	MEMORY USAGE .....	25
COMBINING .....	12	POLYGON ALLOCATION.....	26
SPOT ENEMIES .....	13	POLYGON TOTALS.....	26
BERZERK.....	13	CHARACTER OBJECT PLANNING .....	26
<b>FUEL</b> .....	<b>13</b>	MAP MAKING .....	27
ENERGY .....	13	CLOAKING .....	27
ARMOR.....	14	PATH RULES .....	27
STAMINA .....	14	<b>DESIGN</b> .....	<b>28</b>
AMMO .....	14	MAP MAKING .....	28
<b>BASES &amp; FLAGS</b> .....	<b>14</b>	KEEPING IT FUN .....	28
BASES.....	14	DESIGN GUIDELINES.....	28
FLAGS.....	15	GAMEPLAY INSPIRATIONS.....	29
<b>REWARDS</b> .....	<b>15</b>	SOUND DESIGN.....	29
POWER-UPS.....	15	MAP ONE : ROCKET BASE .....	29
UPGRADES .....	16		
LEVEL-UPS.....	16		
POINTS .....	17		
POINT TALLY .....	17		
POINT SPENDING.....	17		
STORE.....	18		

## **DESIGN**

### **INTRODUCTION**

#### **GAME INFO**

Multiplayer Online Action Game (MOAG) for 1-16 players on internet-connected Windows-based machines.

#### **MISSION STATEMENT**

Mantra: ENERGY is needed to employ TEAMWORK comprising MOVEMENT, COMBAT and TRANSFORMATION to COMBINE, ASSIST, KILL and CONTROL providing POINTS to CUSTOMIZE and UPGRADE one's CHARACTER.

#### **GAME SUMMARY**

Masses of giant robots, called Robos, transform and combine, battling each other for victory in a futuristic military competition game. Mixed with tiny human characters and a host of computer-controlled robots, the battlefield surges with explosions and troop movements. Powered by Energy, the lifeblood of everything; each team's Energy is beneficial to its allies but dangerous to its enemies and must be replenished. Both Robos and their pilots are customizable by collecting power-ups, upgrades and purchasing attribute improvements and mechanical enhancements. Gameplay is a fast, simple shooter style combining strategy, action and teamwork set in the not-too-distant future.

Up to 16 players compete on two teams per Match, playing as human pilots inside giant robots. Each Match comprises 3 rounds of the default game, Capture the Flag, or any number of other competitions. Players spend allocated and earned points to customize their characters, enhancing their abilities and gameplay opportunities. Match results at the end of every 3rd Round determine the overall winning team.

Bases house Flag positions, provide Energy, munitions and spawn points by default, but may also provide manufacturing, communication or defensive capabilities based on Team Votes. A Base voted to manufacture creates automated Spider Bots or MX-03 Shock Troopers to defend its Flag. Communication Bases provide radar and reconnaissance capabilities while a Defensive Base provides gun batteries to ward off invaders.

Each team usually starts with at least one Flag Base of operation. A team's basic objective is to steal as many Flags from the enemy team as possible, while protecting their own. Flags are stationed inside Base structures requiring invading Pilots to exit their giant robots in order to retrieve them. The team with the most Flags wins a round. The team with the highest points at the end of the third Round wins the Match.

Energy powers everything and is depleted over time, requiring players to replenish their energy supplies. Each team has a unique energy frequency that powers their characters. Each team's energy is dangerous to each other, so weapons from one team shoot with its energy frequency, while the opponent's weapons shoot with theirs. Power-ups and upgrades of one team's energy will adversely affect any other team. Characters within a team can help each other by healing them... by shooting them with their own energy!

Characters can be played individually, but the true power of the game is unlocked by transforming and combining characters. Each character has unique abilities in both of its main forms suitable for different situations. Up to four characters can combine in different configurations for greater mobility and firepower. A team using these techniques will usually wipe the floor with lone wolf players. The power of teamwork is employed through combining characters like never before played.

The scale of characters in this game vastly differs, providing a new element to gameplay. Imagine crushing a 1.6 meter tall human enemy with your giant 17 meter tall robot? Now reverse the tables and imagine you're that human running from a robot eight times your size? ...Then out of nowhere 3 meter tall spiders swarm your robot, sucking its energy... and your team mates come to your rescue transformed and combined after having recharged at your base... Jets, Robots, Spiders, Pilots, Vehicles... this game offers many levels of gameplay in a fast-paced, easy to play package.

## KEY POINTS

- 1) TEAM PLAY - Combine to form new combinations offering greater speed, firepower and abilities.
- 2) SIMPLE - No needless complexity of 3D controls - Maneuver in 3D using 2D controls.
- 3) ENERGY - Collect Energy to stay strong; horde it so your enemies can't resupply.
- 4) FLAG & BASES - When you steal the flag is important, as well as what base type your team chooses.
- 5) SIZE MATTERS - Giant robots and tiny humans - Bambi vs. Godzilla anyone?
- 6) TRANSFORMING ROBOTS - That's just cool.
- 7) UPGRADING - Earn points to spend on attribute improvements and gadgets.
- 8) LEVEL-UPS - Team wins count towards that team levelling-up for everyone who plays that team.

## GAME SETUP

### FLOW

The following outlines the basic gameflow of the game, from the first screen that appears:

TITLE SCREEN (includes legal information, logos, etc.)

- 1) ONLINE

- 2) JOIN GAME (browse filtered list of online games in session)
- 2) NEW GAME
- 3) PLAY
  - A) Buy your stuff (pilot, robo, attributes & gadgets)
  - B) Pick your team (fire, water, earth or wind)
  - C) Round 1 begins!

- 1) OFFLINE

- 2) JOIN GAME
- 2) NEW GAME
- 3) PLAY
  - A) Buy your stuff (pilot, robo, attributes & gadgets)
  - B) Pick your team (fire, water, earth or wind)
  - C) Round 1 begins!

- OPTIONS

- DISPLAY DEFAULT SETUP with game options including:
  - A) GAME TYPE (capture flag, conquest, etc.)
  - B) MAXIMUM # of PLAYERS
  - C) MAXIMUM # of COMPUTER characters
  - D) ARENA CHOICE
  - E) DETAILED OPTIONS

- TIME LIMIT

- FRIENDLY FIRE

- CHARACTERS AVAILABLE

- ROBO-V/JET-V
- ROBO-G/GUN-G
- GAMEMASTER
- VEHICLES
- SPIDERS
- MX-03

- VOTING AVAILABLE (this could potentially remove the need to even have initial options – just dump player into default setup and let player or players vote and make setting changes as desired – then again, this could become obnoxious)

- Kick Player
- Game Type
- Arena

[x] Add/Remove Character Types

- CREDITS

BROWSING - When browsing server games, players can preview and sort the following up-to-date information:

- 1) Maps, Teams and Members playing
- 2) Team and Member slots available
- 3) Team Scores
- 4) Time remaining (if applicable)
- 5) Server speeds (ping)
- 6) Match Setup

## STRUCTURE

The basic framework for the game comprises one Match made up of three Rounds. The winner is the team to have the most points at the end of Round Three.

Though this basic game framework remains constant the game types can vary dramatically. Multiple Matches can be set up, looped and arranged as desired. Several game modes can be played, one per round of play, including the following:

- 1) CAPTURE - Players steal enemy's flag while protecting their own; stolen flag must be returned or lost if planted in enemy base.
- 2) DEATHMATCH - Everyone competes to get the most points (no teams).
- 3) CONQUEST - Each team's objective is to control all Bases (no Flags).
- 4) HUNTER - All teams start w/o base control so they must secure a base to respawn and win.
- 5) ANNEX - Getting killed by enemy turns dead character to their team.
- 6) KING - Players fight to keep control of a position.
- 7) SHARPSHOOT - Computer controls stationary and moving targets for the player to attack
- 8) EXTERMINATE - Player team bands together against a computer-controlled team
- 9) CAMPAIGN - Player(s) fight through a series of Matches. Each Match has a Boss Round at the end. Players can help each other or not.
- 10) SCAVENGER - A special flag spawns somewhere on the map that all teams can see. First team to retrieve it to their base gets a point and a new flag is spawned, and so on...
- 11) MVP - 1 player is specially tagged so that the enemy can see his/her position at all times. This player's teammates must protect him/her, while the other team tries to kill him/her.
- 12) CONVOY - One team must deliver a special Flag to a distant location, while the other team tries to steal it.

## NO WAITING

By default, there is a full roster of characters playing in any given game. The computer will assume control of any characters not controlled by players. Consequently, two people on a server, for example, with an 8-person max setting will be playing with six computer-controlled characters. Each person to join a server replaces a computer-controlled character (computer character to next die transfers control to human player). Similarly, any player who leaves a game is replaced with a computer-controlled character. A replacing character's score starts from zero, but the replaced character's score contributes to the overall team score. This method keeps the game open for anyone to play at any time (no more waiting around for someone to join so you can actually play!).

The person who creates a game determines the options such as total number of characters allowed on a server and more. Game setup details have default values that may be modified by the player before starting the Match. See [FLOW](#) for game setup descriptions and details.

## **PLAY MODES**

### **TEAM PLAYER**

Team Play is the basic play mode that players participate in most of the time. In this mode, players maneuver their PILOTS and ROBOS around the Arena to try and win as a team. There are a few teams the player can choose from to play the game. Each team choice provides minor modifications to starting attributes as well (same total points, but assigned slightly differently) based on their team's main "strength" as follows:

- 1) Fire (offense)
- 2) Water (mobility)
- 3) Wind (communication)
- 4) Earth (defense)

Players must remain within the same team for the duration of a match (only exception is explained below), but may elect to choose a new character type whenever they respawn.

To help maintain a balance between teams, new players will be added to teams that are 1) losing and/or 2) with fewer members (and in that order of preference). If both teams have the same number, but one team is dominating, the server may contact one or more of the best players on the winning team and request that they join the losing team in order to balance the round or match.

#### **CREATES TEAMWORK:**

- Transport a friend
- Help a friend move faster
- Heal a friend
- Resupply a friend
- Guide a friend
- Hide a friend
- Warn a friend
- Distract an enemy for a friend
- Protect a friend
- Help a friend do more attack damage
- Help a friend destroy an enemy
- Destroy a specified target for a friend

#### **GAME ACTION(S):**

RIDE  
 LINK RIDE  
 ENERGY  
 AMMO  
 MINI-MAP: GOTO/AVOID  
 CLOAK  
 SPOT/RADAR  
 ENGAGE/DISTRACT  
 SHIELD/COVER FIRE  
 LINK ATTACK  
 ATTACK  
 ATTACK

## **GAMEMASTER**

In addition to the two teams in an arena, there can exist another player-controlled element - the GameMaster.

The Gamemaster's goal is to make sure neither team gets any flags. To accomplish this, a Gamemaster commands all non-player elements on a map, including the following:

- 1) Gun Batteries (by default these are un-manned, but once manned they cannot be controlled by the Gamemaster)
- 2) Spider Bots (transforming from balls)
- 3) Target Battery (target icon flashes for a second and then a large beam shoots out of screen doing massive damage to anything in its radius)
- 4) Finger of God (vertical line flashes for a few seconds while Gamemaster moves it side to side then a thin, vertical beam does massive damage to anything in its line of fire at the instant it strikes)

Gameplay Summary - The Gamemaster spends his time scrolling the map and clicking with his mouse trying to foil all other players. Here's a list of actions the Gamemaster can perform:

- 1) Drop Spider Bot (click on spot and ball drops to that location - max 3 per 30 seconds)
- 2) Control Spider Bot(s) (click on spider, or click/drag to select multiple spiders, then select command from pop-up to either move or attack)
- 3) Fire Gun Battery (click to activate, then scroll to aim, click to shoot, SPACEBAR to disengage)
- 4) Fire Target Battery (takes 30 seconds to fully charge and once charged, have desired position on-screen, select to Fire Target Battery and enjoy)
- 5) Fire Finger of God (activating displays vertical line on-screen that all players can see, scroll mouse to move it, click to shoot it)

Play Balance - Inevitably, there will be one team who's ally plays as the Gamemaster. Although this can disrupt gameplay, the Gamemaster and his actions directly affect his score and both team's scores. Here's how it works:

- 1) For every point one team beats another, the gamemaster loses a point.
- 2) For every flag a team retrieves, the gamemaster loses many points.

## **CHARACTERS**

### **PILOTS**

PILOTS man the giant robots and vehicles in this game. They are the only unit that can steal a Flag from a Base.

#### **PILOT**

- tiny compared to robots (1.6m tall)
- only unit capable of entering base flag chamber to steal a flag

#### **AVERAGE HUMAN**

HEIGHT = 1.6 meters  
WEIGHT = 160 pounds

#### **AVERAGE ROBOT**

HEIGHT = 4 meters  
WEIGHT = 40,000 pounds

AVATARS (FACES) - There should be many variations of each pilot type for people to use as avatars

## ROBOTS

There are four basic playable character types in SKORCH as described below:

ROBO-G – The female robot, standing 13 meters tall, is smaller with weaker firepower but with faster speed. This model mode is a

- use for recon and recovery

GUN-G

- immobile but best firepower
- use for air and ground defense

ROBO-V

- larger and slower but more armored and better firepower
- use for offensive strikes and support

JET-V

- very little firepower and limited arc of fire but fastest and can carry the most payload
- use for quick entry and exit of enemy territory
- use for offensive strikes if teamed up with GUN-G's

The following outlines the various combinations using 2 transformable robots.

Basic Robo transformations:

GUN-G

ROBO-G

JET-V

ROBO-V

From these 4 basic states, these combinations are available:

JET-V + GUN-G (mounted)

JET-V + GUN-G + GUN-G (both mounted)

JET-V + GUN-G + GUN-G + GUN-G (all mounted)

JET-V + ROBO-V (riding)

JET-V + GUN-G (mounted) + ROBO-V (riding)

JET-V + GUN-G + GUN-G (both mounted) + ROBO-V (riding)

JET-V + ROBO-G (riding)

JET-V + GUN-G (mounted) + ROBO-G (riding)

JET-V + GUN-G + GUN-G (both mounted) + ROBO-G (riding)

JET-V + GUN-G + GUN-G + GUN-G (all mounted) + ROBO-G (riding)

## **AI CHARACTERS**

There are 2 computer-controlled characters as well, including the following:

### **SPIDER**

SPIDERS protect Bases for the team currently controlling. They will attack any enemies that come within range of their assigned base. SPIDERS are small enough to pursue PILOTS into the Flag area of a Base. SPIDERS have a special attack where they swarm an enemy and suck its energy away. If the SPIDER is then killed, that energy is available for allies of its energy frequency, or harmful to enemies of that energy frequency.

The SPIDER's unique ball design offers an interesting gameplay mechanism whereby the SPIDER can be kicked like a soccer ball, bowling over smaller enemies and vehicles, and doing damage to anything else it impacts with.

- 3m diameter/height
- spawns once produced at a controlled manufacturing base
- transforms from defensive/highly mobile ball form to offensive spider form and vice-versa

SPIDER SWARM - Player controls a swarm of spider balls... drag and click a la lemmings or RTS to control them (number of spiders depends on player's power level or how many spider eggs they collected)

### **MX-03 SHOCK TROOPER**

The MX-03 are produced when a flag base is neutral and will defend it from any player who attempts to take the flag. Once the flag base is taken, the MX-03 will stop being produced and fight until they are destroyed. The MX-03 is an automated 6-meter tall droid equipped with arm-mounted laser cannons, infrared and thermal imaging. Very basic AI – they can move, turn and shoot, and that's about it!

- 6m height
- spawns in neutral flag bases until base is taken; fights to death

# GAMEPLAY

## ATTRIBUTES

All characters have a set of attributes that define their strengths and weaknesses for everything from their Energy, Armor and Combat ability, to their Speed and Shots per second. These attributes can be modified by spending points allocated or earned each Round. Please refer to [Attributes.xls](#) for detailed information about all character and vehicle attributes.

ATTRIBUTES	UNITS	Background	Playable Characters					AI		Power-ups		
		PLAYFIELD	ROBO-V	JET-V	ROBO-G	GUN-G	PILOT	SPIDER	MX-03	Attack	Defense	
<b>MOBILITY</b>												
<b>measurements</b>												
width	meters	750	12	15	7	4	1	3	3	2	2	
height	meters	500	17	18	4	11	1.6	3	7	2	2	
depth	meters	NA	6	8	13	5.5	0.7	3	2	2	2	
weight	kilograms	NA	20000	20000	5000	5000	100	1000	2800	200	240	
payload	kilograms	NA	10000	25000	5000	NA	40	NA	NA	NA	NA	
<b>speed</b>												
max (ideal)	meters/second	NA	20	50	40	NA	10	15	4	NA	NA	
max (actual)	meters/second	NA	9	18	15	NA	1.8	5.1	NA	NA	NA	
acceleration	seconds	NA	3	1	2	NA	1	2	3	NA	NA	
deceleration	seconds	NA	2	3	2	NA	1	1	2	NA	NA	
climb/jump speed	meters/second	NA				NA				NA	NA	
jump height	meters	NA	30	NA	15	NA	5	10	10	NA	NA	
stamina	seconds	NA	5	3	2	NA	5	7	6	NA	NA	
stamina recharge	seconds	NA	3	1	2	NA	3	2	1	NA	NA	
<b>DEFENSE</b>												
<b>health xx</b>												
armor	points	NA	500	500	100	100	15	40	50	0	50	
health energy	points	NA	500	500	200	200	10	20	20	50	50	
health recharge	points/second	NA	20	15	30	10	2	4	2	10	20	
health duration	seconds	NA	NA	NA	NA	NA	NA	NA	NA	10	10	
<b>OFFENSE</b>												
<b>combat - ranged</b>												
damage	points	NA	50	20	35	100	5	10	10	10	NA	
rate	attacks/second	NA	5	10	7	3	10	2	5	xxx	NA	
shot speed	meters/second	NA										xxx
stamina	seconds	NA	3	1	2	4	1	4	2	xxx	NA	
stamina recharge	seconds	NA	2	1	2	3	2	1	1	xxx	NA	
<b>combat - melee</b>												
damage	points	NA	30	NA	10	NA	1	10	8	NA	NA	
rate	attacks/second	NA	1	NA	2	NA	4	4	3	NA	NA	
stamina	seconds	NA	1	NA	2	NA	5	2	4	NA	NA	
stamina recharge	seconds	NA	1	NA	1	NA	3	2	1	NA	NA	

xx = Points represent Energy Points; Armor energy points can be repaired but not regenerated whereas Health energy points can be regenerated automatically; when Armor EP reach zero, they are gone and need to be repaired or replaced with a power-up; when Health EP reach zero, stamina needs to regenerate.  
 xxx = matches character using power-up

AVERAGE FIGHT ZONE takes place within a diameter of 150 meters (about 1 screen when selected character is robo)

The following lists the starting attribute values of each unit when the 1st round begins:

- 1) ARMOR - Indicates how much defensive strength this unit has and how much damage it can withstand.
- 2) DAMAGE - Indicates how much offensive strength this unit has and how much damage it can inflict.
- 3) SPEED - Indicates the speed with which this unit can move across the battlefield.
- 4) SURVEY - Indicates the surveillance ability of this unit and the range of its ability to survey.

## INTERACTION

There are many ways in which characters can interact with other characters and their environments. Interaction is the fundamental building block for all gameplay. The following chart is from [Interaction.xls](#) – please refer to this spreadsheet for up-to-date information.

The following chart outlines how each object type interacts with another...  
**bold red text** indicates new animations needed

ELEMENT CATEGORY	ALLIED	to	ALLIED ELEMENT	INTERACTION DESCRIPTION	ALLIED	to	ENEMY ELEMENT	INTERACTION DESCRIPTION
PILOT TO VARIOUS	PILOT	to	SPIDER	run backwards on ball form to move quickly	PILOT	to	SPIDER	attack it; get rolled over; get stabbed/killed!
	PILOT	to	MX-03	be carried by MX-03 and control its movement (but cannot shoot)	PILOT	to	MX-03	attack it; get kicked/punched/crushed
	PILOT	to	BASE (manufacturing)	select and initiate production of units (if charged)	PILOT	to	BASE (manufacturing)	attack it; steal flag if available
	PILOT	to	BASE (communication)	activate radar and supplies	PILOT	to	BASE (communication)	attack it; steal flag if available
	PILOT	to	BASE (fortification)	man guns	PILOT	to	BASE (fortification)	attack it; steal flag if available; man guns (but this will heal enemies and hurt your team mates!); get shot
	PILOT	to	FLAG	pick up; drop; replace at ALLIED base	PILOT	to	FLAG	pick up; drop
	PILOT	to	VEHICLE	enter; drive/pilot/shoot; exit	PILOT	to	VEHICLE	attack it; jump on top in stunt style; get run over/knocked away
	PILOT	to	PILOT	attack it	PILOT	to	PILOT	attack it; be attacked
ROBO TO ROBO	JET-V	to	JET-V	none	JET-V	to	JET-V	shoot it; collide with it
	JET-V	to	ROBO-V	combine	JET-V	to	ROBO-V	shoot it; collide with it
	JET-V	to	GUN-G	combine	JET-V	to	GUN-G	shoot it; collide with it
	JET-V	to	ROBO-G	combine	JET-V	to	ROBO-G	shoot it; collide with it
	ROBO-V	to	JET-V	combine	ROBO-V	to	JET-V	attack it; collide with it
	ROBO-V	to	ROBO-V	ally oop	ROBO-V	to	ROBO-V	attack it; collide with it; grapple/throw it
	ROBO-V	to	GUN-G	none	ROBO-V	to	GUN-G	attack it; collide with it; grapple/throw it
	ROBO-V	to	ROBO-G	ally oop	ROBO-V	to	ROBO-G	attack it; collide with it; grapple/throw it
	GUN-G	to	JET-V	combine	GUN-G	to	JET-V	shoot it
	GUN-G	to	ROBO-V	none	GUN-G	to	ROBO-V	shoot it
	GUN-G	to	GUN-G	none	GUN-G	to	GUN-G	shoot it
	GUN-G	to	ROBO-G	none	GUN-G	to	ROBO-G	shoot it
	ROBO-G	to	JET-V	combine	ROBO-G	to	JET-V	attack it; collide with it
	ROBO-G	to	ROBO-V	none	ROBO-G	to	ROBO-V	attack it; collide with it; grapple/throw it
	ROBO-G	to	GUN-G	none	ROBO-G	to	GUN-G	attack it; collide with it; grapple/throw it
	ROBO-G	to	ROBO-G	ally oop	ROBO-G	to	ROBO-G	attack it; collide with it; grapple/throw it
ROBO TO SPIDER	JET-V	to	SPIDER	shoot it; collide with it	JET-V	to	SPIDER	shoot it; collide with it
	ROBO-V	to	SPIDER	attack it; kick it (rolls in ball); finger spin (like a basketball)	ROBO-V	to	SPIDER	attack it; kick it (rolls in ball)
	GUN-G	to	SPIDER	shoot it	GUN-G	to	SPIDER	shoot it
	ROBO-G	to	SPIDER	attack it; kick it (rolls in ball); juggle (like soccer ball)	ROBO-G	to	SPIDER	attack it; kick it (rolls in ball)
ROBO TO MX-03	JET-V	to	MX-03	shoot it; collide with it	JET-V	to	MX-03	shoot it; collide with it
	ROBO-V	to	MX-03	attack it; grapple/throw it	ROBO-V	to	MX-03	attack it; grapple/throw it
	GUN-G	to	MX-03	shoot it	GUN-G	to	MX-03	shoot it
	ROBO-G	to	MX-03	attack it; grapple/throw it	ROBO-G	to	MX-03	attack it; grapple/throw it
ROBO TO BASE	JET-V	to	BASE	shoot it; collide with it; get energy recharged	JET-V	to	BASE	take damage (avoid enemy bases! No damage if neutral base)
	ROBO-V	to	BASE	attack it; get energy recharged	ROBO-V	to	BASE	take damage (avoid enemy bases! No damage if neutral base)
	GUN-G	to	BASE	shoot it; get energy recharged	GUN-G	to	BASE	take damage (avoid enemy bases! No damage if neutral base)
	ROBO-G	to	BASE	attack it; get energy recharged	ROBO-G	to	BASE	take damage (avoid enemy bases! No damage if neutral base)
ROBO TO FLAG	JET-V	to	FLAG	pick it up if outside of base	JET-V	to	FLAG	pick it up if outside of base
	ROBO-V	to	FLAG	pick it up if outside of base	ROBO-V	to	FLAG	pick it up if outside of base
	GUN-G	to	FLAG	pick it up if outside of base	GUN-G	to	FLAG	pick it up if outside of base
	ROBO-G	to	FLAG	pick it up if outside of base	ROBO-G	to	FLAG	pick it up if outside of base
ROBO TO VEHICLE	JET-V	to	VEHICLE	shoot it; collide with it	JET-V	to	VEHICLE	shoot it; collide with it; block its movement (if hovering low)
	ROBO-V	to	VEHICLE	attack it	ROBO-V	to	VEHICLE	attack it; block its movement
	GUN-G	to	VEHICLE	shoot it	GUN-G	to	VEHICLE	shoot it; block its movement
	ROBO-G	to	VEHICLE	attack it	ROBO-G	to	VEHICLE	attack it; block its movement
ROBO TO PILOT	JET-V	to	PILOT	shoot it; collide with it; warp to cockpit (if space available)	JET-V	to	PILOT	shoot it; collide with it; block its movement (if hovering really low)
	ROBO-V	to	PILOT	attack it; warp to cockpit (if space available)	ROBO-V	to	PILOT	attack it; block its movement; crush it
	GUN-G	to	PILOT	shoot it; warp to cockpit (if space available)	GUN-G	to	PILOT	shoot it; block its movement
	ROBO-G	to	PILOT	attack it; warp to cockpit (if space available)	ROBO-G	to	PILOT	attack it; block its movement; crush it

## CONTROL

Game controls are as follows:

User Action/Effect	User Entry	Character Action
Move/Push Left	A	Moves or pushes an obstruction to the left
Move/Push Right	D	Moves or pushes an obstruction to the right
Jump	SPACEBAR	Jumps; tap for small jump and hold for highest jump
Crouch	S	Crouches (if available) to avoid higher attacks and to navigate
Combine	Q	Character enters combine mode if Host or combines with host if Guest
Transform	E	Transforms between configurations
Block	SHIFT (left)	Blocks (if available) attacks that approach unit's current facing
Action	C	Performs Action (hold for list; tap to execute last used action)
Team Speech	Z	Text/Speech to Team only
Enemy Speech	X	Text/Speech to Enemy and Team
Spot	CTRL+CLICK MOUSE	Alerts allies to special thing if clicked close enough to it
Toggle Attack	ALT	Toggles attack type (cut?)
Aim	DRAG MOUSE	Moves targeting cursor around screen
Attack	CLICK MOUSE	Attacks either with melee or ranged attack depending on target
Game Options	TAB	Displays options that can be modified/saved; includes game quit
Map Toggle	F	Toggles mini-map to full-screen map and back again
Special 1	1	Executes Special Move 1
Special 2	2	Executes Special Move 2
Special 3	3	Executes Special Move 3
Special 4	4	Executes Special Move 4

Controls can be remapped to whatever keys/buttons the player desires.

Please refer to [ControlMap.xls](#) for a visual representation.

## MOVING

This game attempts to maintain simple control harkening back to classic 2D side-scrolling action adventure games, while presenting it with 3D graphics and 3D backgrounds. As such, characters need to not only move left and right, up and down in and on a map, but they need to be able to move in and out as well. By using a system of paths, the background can maintain its 3D qualities, while the player need only navigate in a 2D fashion. When the player comes upon branches in the paths, where one path goes into the screen, while another out of it, the player holds up or down and continues moving.

Players will want to move one direction while facing another (i.e. walking backwards while shooting forward). Pressing "left" faces left and pressing "right" faces right. Holding the "SHIFT" key and pressing either direction maintains the character's facing but moves forwards and backwards in that direction.

JET-V FLIGHT - Basic JET-V controls are different from the ROBO-G, GUN-G or ROBO-V units in that the mouse button becomes thrust. While holding the thrust button the JET-V will move forward (with gravity and physics modifying its velocity). The JET-V shoots using the jump button. Afterburner is the directional buttons facing forward (i.e. A if facing left or D if facing right). The JET-V should be best used at high altitudes so that the gunners have a full arc of fire below them (since they can only shoot in a lower semi-circle). Taking off should take a little bit of effort, but once airborne, the JET-V should almost float. This means it takes more effort for the player to down than it does for them to go up. Turning should maintain a fixed forward direction while turning and still be sliding backwards a bit (moreso at high speeds).

## FIGHTING

Players need only focus on where a target is on-screen, regardless of its depth into or out of the screen in relation to the shooting character. For this reason, the player should aim in that direction by moving the mouse accordingly, then clicking the mouse button to shoot. However, players can click on the targets themselves to achieve greater accuracy with their shots.

If player holds fire button down continuously, then full animation plays and loops. Pressing fire button repeatedly resets animation to repeat playing from a few frames ahead of start (see animations.xls file)

Characters normally use ranged (Shot) attacks throughout the game, but will automatically use their melee attack when engaging an enemy at close range. Controls remain the same in either case.

The four ROBO configurations employ various weaponry as follows:

ROBO-V	- player must pinpoint shot location for gun-mounted laser cannon to strike (laser has 90-degree arc of fire)
JET-V	- shoots straight ahead and requires flight to get a target within line of shot
ROBO-G	- player must pinpoint shot location for hand-held sword to strike
GUN-G	- shoots in a 30-degree arc of fire (straight is 0-degrees and upwards)

SHOTS - All shots detonate on impact with a character, object, hazard or background, inflicting calculated damage. The only exceptions include:

Armor class Timed Grenade attack (detonate when timer ends only)

Ricochet Power-Up (detonates when life of shot expires but does not explode when colliding with non-character elements)

#### SHOT NAMES

VIPER BOLT (COMMANDO)

NEEDLE JET (ATV)

HAMMER SHELL (Recon)

TITAN ORB (Cannon)

CHARGE BOMB (Armor)

Each team has a color, and all projectiles of each team member should use their team's respective color. This indicates friendly and enemy fire to players. Allied shots should display at 50% opacity as well.

BLOCKING - Each character has one defensive block move which, when used against an incoming shot or melee attack reduces damage from such hits by 75%. This benefit only applies to attacks that connect with blocking collision. Characters may not block and attack (melee or shot) at the same time.

## DAMAGE

Every hit a character sustains makes them invulnerable for 1 second while their sprite flashes. Once a character's health reaches zero they will die on the next hit unless they are repaired (see [DEATH](#)). Damage that drops health from a positive to a negative number in one hit is treated as damaging “to zero” (zero is minimum). Any additional damage that hit (or additional hit during 1-second invulnerability) inflicts is disregarded. Falling Damage (to falling unit and anything it hits) = 10% health (of falling unit) damage per full screen fallen done to victim of the fall.

## TRANSFORMING

Each character transforms differently as a visual experience, but also requires slightly different gameplay to achieve. For example, for ROBO-V to transform into JET-V, the player should jump first and initiate the transformation just before the peak of their jump. This prevents the jet from colliding with the ground before its thrusters can engage. Logically, the player can execute the transformation at any time, but clearance above the ground is critical to avoid damage. When transforming from JET-V to ROBO-V, the same rule applies. In contrast, ROBO-G and its GUN-G counterpart do not require such clearance, with one exception – in order to attach to the underbelly of JET-V, a special “COMBINE” action is required (see below).

## COMBINING

Characters can combine to increase their firepower, mobility and collective team abilities. Combining is achieved through the process of Transforming and connecting. There are certain instances of combining that require slightly different gameplay. For example, for ROBO-G to “combine” with JET-V, the player controlling ROBO-G must decide whether s/he wants to ride the jet or transform to become a belly-mounted cannon... If the choice is to ride, the player must simply jump when near the JET-V while executing the COMBINE action (ROBO-V works the same way). However, if the player wants

the character to become a belly-mounted cannon, s/he must perform a COMBINE/TRANSFORM combo while jumping (the hardest combo to execute) to clear the ground and prevent damage.

ROBOS and their forms are classified as either Guest or Host combiners, indicating whether they can automatically combine with a nearby teammate, or if they need to wait until another teammate enters combine mode first, respectively. The following defines each type:

JET-V	Host (for GUN-G, ROBO-G and ROBO-V)
ROBO-V	Guest (for riding JET-V)
GUN-G	Guest (for mounting as gun under JET-V)
ROBO-G	Guest (for riding JET-V)

As indicated, JET-V is the only Host Combiner mode available.

## SPOT ENEMIES

SHIFT + Mouse click on targets and you will spot them on your team's minimap (so all team members can see that enemy)

DETECTION KIT - This device is a box about the size of a human head is placed. Anything that doesn't move at a slow speed will make the box ping the owning team's radar.

ANTI-DETECTION KIT - Scanner that jams an enemy's detection box without setting it off.

## BERZERK

To simulate battle rage, characters build up Berzerker rage when they inflict damage to enemies and when taking damage themselves. This rage is represented by a Berzerker Meter that starts out empty and fills accordingly. Once the meter reaches its maximum it flashes red, indicating that the player has a split second to activate their character's Berzerker Mode. Once activated, this mode provides some special, temporary benefit to the player's character. Each character has a different Berkerker power. To activate a character's Berzerker power, a player should react to an on-screen indicator and follow the rapid prompts. If successful, the character enters its Berzerker Mode.

BERSERKER mode rotates the chest plates to face forward on the JET-V, then open and launch its missiles.

## FUEL

There are four fuel types in demand throughout each game. These include:

- 1) Energy
- 2) Armor
- 3) Stamina
- 4) Ammo

## ENERGY

Energy is the foundation upon which all characters depend to function. Once a character's Energy is diminished to zero, they are dead. Energy is depleted over time and by taking direct damage. A character's Armor provides defense against taking direct damage to its Energy source. Once Armor is completely destroyed, that character's Energy total takes direct damage. For these reasons, players are naturally motivated to replenish their energy supplies throughout each round. (See [Attributes.xls](#) for details)

ROBO Energy can be replenished by collecting Energy Cells that spawn throughout the playfield. Allied bases replenish Energy as well. Energy Cells are hidden in certain Destructable Crates and can also be spewing out of broken Power Generators, etc. When a character spawns they always have full Energy.

PILOTS must be particularly careful, as Energy Cells are fatal if touched. To replenish a PILOT's energy, he/she need only get \*near\* an Energy Cell.

ENERGY FREQUENCY - Each team has a unique energy frequency that it benefits from, shoots with and utilizes in general. This energy is dangerous to any opposing team, however.

Gameplay that stems from this includes:  
Shoot your opponents to do damage to them  
Shoot your team mates to heal them

Power-ups that involve energy provide the unlocking team's energy frequency.

Gameplay that stems from this includes:  
Collect your team's energy power-ups for benefits  
Touch your enemy's energy power-ups and take damage

INDICATION OF ENERGY - All units have colored eye plates (glow texture) - this should represent their Energy supply as follows:

BLUE = 66-100% (full health)  
PURPLE = 36-65%  
RED = 11-35%  
RED flashing = 10% or less (almost dead)

## **ARMOR**

A character's internal energy supply is protected by an outer armor shell. This armor can be repaired, but once destroyed, any damage that the armor would normally take is transferred directly to the character's internal energy supply. For this reason, it is important to keep one's armor at maximum! Armor can be repaired up to its original maximum value, but through the Armor-Up power-up, it can even be doubled. When a character spawns they always have full Armor. (See [Attributes.xls](#) for details)

## **STAMINA**

Certain character abilities and weapons have a "stamina" level which dictates how long an action can be sustained. Running and attacking are two things that have a stamina limit. Every time a character's stamina is maxed out, the character overheats, requires more time to recharge its stamina, and incurs damage. Exerting stamina without maxing it out incurs no damage. Every character automatically replenishes their stamina over time while not exerting themselves. The Stamina-Up power-up can also immediately replenish stamina up to or even beyond the original maximum. (See [Attributes.xls](#) for details)

## **AMMO**

Ammunition can be replenished by acquiring Ammo-Up power-ups. Attempting to shoot without Ammo results in an annoying click and buzzer sound, signifying that the weapon needs more ammo! (See [Attributes.xls](#) for details)

## **BASES & FLAGS**

### **BASES**

Bases represent command centers for teams. They allow team members to spawn, as well as a few specific types of functions outlined below. Bases start in either an owned state devoted to a certain team or an un-owned neutral state. Bases occupy 1 game unit (30Wx30Dx15H) space, along with any available gutter area (see [MAP MAKING](#) for details).

Bases create energy suitable for whichever team owns the base (i.e. blue energy when the blue team owns the base, etc.). In this way, controlling bases provides more energy for a team. Bases also provide the resupply of munitions. Both the energy and munitions resupply are fairly slow.

Bases cannot be stolen, but they can be controlled. A base is controlled by having one or more enemy team members alive within its control range for a certain amount of time (10 seconds on average, but more allies controls the flag faster). As the seconds go by, the base ownership changes from the original team, then to neutral, then to the attacking team's. Once new

ownership is established, the flag changes as well, so stealing it is no longer an option (though it is for the enemy!). Note that any allies within range of a flag help keep its allied ownership – so the more enemies, the more the balance sways to the enemy's control of a base. A Neutral base offers no energy and any existing spiders & mx-03 fight until dead.

At game start-up, all bases owned by teams are assigned one of the following functions:

- 1) Manufacturing - Creates automated SPIDERS or MX-03's to protect the Base & Flag.
- 2) Communications – Provides RADAR surveillance around the base or intercepts enemy communication.
- 3) Fortification – Provides automated defense cannons to protect the Base & Flag.

Once a new team takes control of a base, that team has a limited time to team vote what the base's function (one of the above) will be. In the case of a tie, the game randomly chooses one of the victorious choices. Once a team controls a base, any bots already stationed at that flag become allies. (i.e. they fight for your team!). If the base is assigned to be a Manufacturing base, new bots fight for that team as well.

DAMAGE - Bases can be damaged and their functionality disabled. Repairing a base can restore its disabled functionality.

## FLAGS

A Flag offers points. A Flag can be stolen at any time simply by touching it; under either team's control, or in a neutral form. A Flag stolen after it has turned to invader's control yields MOST points (takes 5 seconds on average). Flags can ONLY be stolen from a base by PILOTS because they are located within protective chambers accessible only by PILOTS. After being stolen, a Flag can only be planted in an Allied base (or retrieved by the original team and planted at one of their controlled bases).

A Flag rotates with a harmless energy shield around it until a PILOT enters its radius. If Pilot leaves this radius, shield comes back up and flag rotates again. The Flag, when rotating, rotates either clockwise (for Team 1) or counter-clockwise (for Team 2). As control of a Flag changes, rotation will slow to a stop, then change direction as necessary. However, when a PILOT comes in contact with the Flag, it immediately stops rotating and is in his/her possession (stolen).

Good teamwork is usually required to protect an Ally PILOT with a Flag from enemy SPIDERS, MX-03's and enemy ROBOS.

## REWARDS

### POWER-UPS

Power-Ups represent limited enhancements applied to Robo characters (Pilots do not use them). Power-Ups are contained within SPIDERS. Players must destroy SPIDERS to release the Power-Up inside them. Once a SPIDER is defeated, the power-up is ejected as a "POD" and floats around the player's character until it dies. Players can have as many pods active as they can find. Duplicate PODS increase the strength of any existing like PODS. As a Power-Up is acquired, an iconic representation of it displays on-screen to indicate it is active. As the duration ends, the icon flashes to indicate its effect will end soon. Once the icon disappears, the power-up is used up and gone.

The following represent the different power-up PODS (for ROBOS not PILOTS):

RED	STORM	builds up attack power (hold down mouse button and release to fire)
ORANGE	SNAKE	sine wave shot path
YELLOW	DUALSHOT	doubles shots without using more ammo (+/- 15 degrees from normal direction)
GREEN	TRISHOT	triples shots without using more ammo (+/- 22.5 degrees plus center)
BLUE	FREEZER	freezes enemies but does half damage (break out by wiggling mouse quickly)
VIOLET	RICOCHET	shots bounce off anything but enemies
BROWN	BOOST	increases movement speed by 20%
WHITE	ARROW	increase shot movement speed by 20%
BLACK	SHELLS	reloads ammunition (immediate and 1-time effect)
CYC CLR	RESTORE	restores all health (immediate and 1-time effect)

CYC B&W      AURA      increases health maximum by 300 (immediate and 1-time effect)

## UPGRADES

Players have the opportunity at the beginning of each round to spend points in their possession. If they choose to upgrade their PILOT or ROBO, they spend points to upgrade one or more attributes. Each attribute costs a different amount of points to upgrade. (The following chart is from [Upgrades.xls](#) – please see spreadsheet for up-to-date details)

ATTRIBUTES	Playable Characters			AI		
	V-SERIES	G-SERIES	PILOT	SPIDER	MX-03	
<b>MOBILITY</b>	cost =		100	130	30	
<b>measurements</b>						
weight		10	10	NA	NA	NA
payload		10	NA	NA	NA	NA
<b>speed</b>						
maximum		10	5	15	NA	NA
acceleration		10	5	15	NA	NA
climb/jump speed		15	20	20	NA	NA
jump height		15	20	20	NA	NA
stamina		15	20	15	NA	NA
stamina recharge		15	20	15	NA	NA
<b>DEFENSE</b>	cost =		150	130	40	
<b>health</b>						
armor		50	40	65	NA	NA
health energy		20	30	15	NA	NA
health recharge		30	30	20	NA	NA
<b>OFFENSE</b>	cost =		200	190	50	
<b>combat - ranged</b>						
damage		5	5	10	NA	NA
rate		10	10	10	NA	NA
shot speed		20	15	25	NA	NA
stamina		10	10	15	NA	NA
stamina recharge		10	15	10	NA	NA
<b>combat - melee</b>						
damage		5	10	5	NA	NA
rate		10	10	10	NA	NA
stamina		10	10	5	NA	NA
stamina recharge		20	10	10	NA	NA

NOTE: numbers indicate how much the attribute is affected when its general ability is upgraded

## LEVEL-UPS

Every player on the web has the opportunity to play as a particular color, representing a particular team in a match. There is a common thread between everyone on the web who plays that color through the concept of Level Ups. A "Levels Up" is a permanent increase in a team color's attribute values. Every time a team color is leveled up, anyone playing as that team color benefits from the attribute increase(s) from that point on.

To prevent one team from being too much more powerful than any other, no team may be more than a TBD # of levels above any other. This means that once the top team reaches 5 levels ahead, any further leveling-up ceases to occur. This does NOT mean that leftover points are stored – they are lost. This collectively incentivizes players to bring all team colors up in strength and ability.

Please consult [Upgrades.xls](#) for attributes that can be leveled up.

NOTE: Be sure to design exactly how powerful each attribute can become. Some are more practical to improve more than others. For example, if you keep leveling up movement, characters will all be blazing across the screen Turbo style... which changes the entire game too much.

## POINTS

Points allow players to customize their robots and pilots. Points are provided at the beginning of a Match, and are earned during gameplay in order to spend them at the beginning of each Round (see [Point Spending](#) for details).

EARNING POINTS - Players get points for the following at the end of every Round:

+1	Staying alive (+1 point every second)
+100	Killing enemy with full health (proportional % of this total if enemy is already damaged)
+50	Killing enemy at ally base/flag
+100	Killing enemy with ally flag
+50	Spotting unspotted enemy with flag (+25 for re-spotting after spot disappears)
+20	Spotting unspotted enemy at ally base/flag (+5 for re-spotting after spot disappears)
+10	Protecting ally from enemy fire (+10 points every shot taken)
+2	Transporting ally with flag to ally base (+2 points every second transporting)
+50	Retrieving an ally flag
-1	Last ally alive without any ally bases (-1 point every second)
+1500	Capturing ally flag after all are in enemy control
+200	Stealing a flag from enemy base
+500	Delivering a flag to an ally base
+1000	Being on the winning team
+100	Being on the losing team
+2000	Switching from winning team to losing team then losing team wins
+10-250	Assisting team mates (various)
+100-500	Leaving winning team to join losing team (greater score difference & more time to spare = more points)
-500-1000	Leaving losing team to join winning team (penalty greater the less time is left in round)
Varies	Players can also pick up "Point Boxes" that give them point bonuses

## POINT TALLY

At the end of every round, earned Points are tallied for every player to see. Any earned/awarded points at the end of a Round can be applied towards [Point Spending](#) at the beginning of the next Round. The only exception is that the third Round ends the Match, so any earned points are devoted towards determining the overall winner of the Match.

## POINT SPENDING

While the game is loading at the beginning of every Round, players are presented with some purchase options. Players start a Match by purchasing a PILOT and a ROBO. Each player has a certain number of points to spend each round. Any left-over points are doubled for the next round's purchase process. Excess points left-over at the end of a Match (i.e. after 3<sup>rd</sup> round) are doubled and added to the team's total score.

Points allocated to or spent on PILOTS are saved for an entire Match, even if the PILOT dies during a round. However, points allocated or spent on a ROBO last for as long as the ROBO remains alive; if it dies in a round, any points allocated to it are lost and must be respent. As a result, PILOT upgrades are more expensive than ROBO upgrades to help insure balance.

Players have a limited time to do their purchasing. Players who fail to complete their purchases (even if they spend no points) forfeit their points. Note that in order to capitalize on the "double unused points next round" benefit, players must still conclude their purchase session within the allotted time frame. Once the purchase process is complete, the game begins.

A PILOT that has survived a previous round of the same Match can be upgraded by spending points on his/her attributes. Likewise, so can a ROBO be upgraded that has survived a previous Round. ROBOS may also be traded in for points based on a “blue book” value (i.e. how much armor/energy is intact – full = full value, etc.)

## STORE

Players purchase their PILOTS and ROBOS as well as gadgets and upgrades during the Purchase phase at the beginning of each Round. The following comprise all that a player can spend their points to buy:

\*\*\*\*\* Reorganize the following list and break down based on attribute improvement (even if it’s a gadget) – i.e. Improves Stamina; Improves Speed, etc. instead of Offensive; Defensive, etc.

### PILOTS

Gender  
Male  
Female  
Attributes  
Energy

### ROBOS

Model  
G-Series ROBO  
V-Series ROBO  
[UNLOCK] SPIDER  
[UNLOCK] MX-03  
Attributes  
Energy  
Recharge Speed-Up  
Maximum-Up  
Mobility  
Jump Higher  
Double Jump  
Booster Pack  
Offense

### GADGETS

#### Offensive

- 1) Rapid Fire (Coolant Grill)
- 2) Explosive (Dark Energy)
- 3) Remote Detonation (ROBO Blast)
- 4) DISRUPTER GRENADE - Explosion creates a temporary field in which all energy within it converts to the thrower team's energy frequency. Designed for PILOT use only.
- 5) Berzerker Variants

#### Defensive

- 1) Shield (Gravity Spinner)
- 2) Shield (Shock Barrier)
- 3) Catcher (R.A.A.D.) – attracts shots that build up Enemy energy frequency around ROBO; Energy can be converted to ally frequency if Convertor is purchased

#### Detection

- 1) Detection (Seeker)
- 2) Anti-Detection (Black Box)
- 3) Cloak Self (Static Fluxuator) – most expensive
- 4) Cloak Area (Dome Fluxuator) – less expensive

#### Other

- 1) Energy Conversion (Convertor)
- 2) Munitions Matrix (provide munitions supply packs)

## **STARTING THE GAME**

### **SPAWNING**

All characters populate, or "spawn" somewhere on the map when a Round starts or after dying. Rules for spawning include:

- 1) Start of round spawns Allies in random locations within 1 screen diameter of their home base.
- 2) Spawned characters are invincible for 1 second (flashing) or until the player engages any controls, whichever comes first.
- 3) Never spawn on top of another character's collision box.
- 4) Never spawn near an enemy's collision box.
- 5) Characters may only spawn if there is at least one ally Base under control

## **ENDING THE GAME**

The game ends either through participation whereby one side wins or loses, or through death or quitting. All scenarios are described below:

### **DEATH**

When a PILOT or ROBO'S Energy level dips below 0, it is considered dead and plays its Die animation while fading away (fades to completely transparent). If a Flag had been carried, it drops to the ground.

PILOT DEATH - Once a PILOT is dead, s/he cannot be revived and must respawn from an ally Base. If no Bases are in the teams' possession, they cannot respawn until one is reacquired by another teammate. Any Power-Ups acquired fall to the ground around the dead PILOT.

ROBO DEATH – When a ROBO dies, the PILOT has a split-second to eject before the ROBO explodes. Once dead, ROBOS cannot be repaired or revived. The player must purchase a new ROBO next round, or try their luck using vehicles or finding an unused one for the remainder of that round.

ROBO DESTRICT - You can set your bot to self destruct with a timer... (so leave it and sneak around then BOOM! as a distraction or hurting nearby enemies)... and an upgrade could be "remote destruction activation"...

### **WINNING**

Every Round determines one winner, and the Match determines the overall winner. In addition to recognition, winners receive [Points](#) to spend (see [Point Spending](#)). Wins are tallied towards team colors so they can [Level-Up](#).

### **LOSING**

Any team that does not win loses. Losing a Round doesn't mean a team can't win the Match, however.

### **QUITTING**

If a character quits the game through choice or by system/game shutdown their team retains any points that character contributed for round/match tally purposes. If that character rejoins before the match ends, his/her points will continue to be tracked as if he/she never left. If same IP doesn't rejoin, a new IP will accrue a new set of points to be added to the old points for the team's sake.

To determine win/loss for a character that has quit for whatever reason, consult the following rules:

If team was winning, character quits then team wins round, award a win to character

If team was winning, character quits then team loses round, award a draw to character

If team was losing, character quits then team loses round, award a loss to character  
 If team was losing, character quits then team wins round, award a draw to character

## **HUD**

### **GAME HUD**

The following information should be conveyed on-screen in distinct locations:

Allied team flag capture total

Enemy team(s) flag capture total(s)

Allied team kill total

Enemy team(s) kill total(s)

Allied team members' names (as well as "Entire Team" for selection purposes)

Player character's health total

Player character's selected weapon's remaining ammunition

Text should be shown to indicate the following:

A player enters round

A player exits round

A player "A" kills player "B" (and "C," etc.)

A Flag stolen (means taken from base but not delivered to ally base)

A Flag captured (means delivered to ally base)

A Flag restored

Allied text entry within team (between allies)

Enemy text entry to/from team (from or directed to enemy)

Transport health (for pilot or occupied gun pods relevant to player)

Recon CLOAK meter (depletes over time and at zero cloaking ceases; player must allow meter to replenish over time; depletes 3x faster than it replenishes)

Recon Laser Tripwire locations (should be visible to your teammates)

Recon Team Cam (window showing video of team cam map location, with location indicated on mini-map)

### **MINI-MAP**

To assist players in identifying target locations to move towards, attack, defend or avoid, a mini-map exists on-screen to convey the following:

Player's location

Teammate's locations (normal; out of Cloak mode)

Teammate's cloaked locations (in Cloak mode)

Enemy locations on-screen for player

Enemy locations identified through Team Cam (via Recon unit) 6) Team Cam source location and radius

Player's Team flag (always visible until planted into enemy base)

Enemy flags (enemy flag is tagged visible once teammate comes into same screen; flag remains visible for 3 seconds minimum)

Flag Pads (ally or enemy) and a visual indication of their type.

Rules of mini-map color use:

- 1) Each team has a color, and all indications of each team member should use their team's respective color
- 2) Player-centric indicators should maintain their team's color combo with the addition of a white border around the indicator
- 3) General indicators should be indicated on the mini-map in gray (i.e. timers, etc.)

Mini-map expands to full-screen as a "Map" by pressing the M button. Here players can issue commands and warnings (collectively called "Com") to their team by dragging the mouse over a location they'd like to identify, then clicking with the left mouse button to bring up relevant options (such as "Avoid this spot" or "Move here," etc.). To issue Com to individuals, players can select one or more team member's names and then drag and click as normal. Communicating with individuals is done this same way.

## TEXT RECOGNITION

Customizable text recognition files could allow players to use the default or set up their own form of short-hand communication (useful for clans especially). Certain combinations of keystrokes would translate into respective broadcast messages, along with on-screen identifiers. For example, player types "=df2" then presses Enter would transmit a message to their team that translates into a message (with voice) that says "Defend Flag 2!". In addition, Flag 2 in the mini-map would be highlighted.

## ENVIRONMENT

### BACKGROUNDS

Backgrounds comprise various foreground (FG) and background (BG) elements. In general, the FG comprises the player platforms and things the player can interact with, while the BG represents visual elements behind this plane. To accentuate the visuals, there can also be close foreground elements between the camera and the FG plane, as well as far background elements to emphasize depth in the scene.

### TERRAIN

Terrain represents the FG platforms that block or promote player character movement. The terrain should include normal, invincible terrain elements as well as select destroyable portions including: DESTRUCTIBLE WALLS and DESTRUCTIBLE FLOORS. These provide three gameplay advantages to players including: for fun (blow shit up!), tactical strategy (blow floor so weight drops on enemy or blocks passage) and navigation strategy (open up a shortcut). The player should be able to distinguish between destroyable and non-destroyable terrain elements through visuals and sound cues (stepping on it makes a different sound, or shooting it makes a different sound).

### HAZARDS

Hazards are terrain elements that can affect characters by damaging them or affecting acceleration or deceleration as follows:

hazard	health	accel.	decel.
LAVA	-25/s.	-300	+300
ICE	na	-150	-300
CHARGE	-10/s.	-500	-500
OIL	na	-100	-150 (shoot and it catches fire, lighting up area around it)

### THEMES

Floating Factory - Giant, rusty gears dripping with fluids in torch-lit expanses of dirt and grime. Factory arms, floor grates, security fences, stairwells (a la Aliens), steam shooting out of pipes, dark and unfriendly atmosphere. HOT with cool far bg scene of cloudscape at sun up (this factory is part of a floating city).

Space Station – No gravity, but each unit has magnetism to attract it to the nearest platform. When a unit jumps it will keep moving straight until it magnetizes to a new platform.

For most Arenas, gravity acts normal, whereby a character may jump, then they fall back down to the ground. For some Arenas, namely the space-style Arenas, characters are equipped with gravity magnets to keep them planted to the nearest surface. What this means is that characters can jump from one platform and quickly flip to land on the ceiling... or the wall... each platform would have its own gravitational pull. Imagine characters running down a wall, shooting at characters on the ceiling! Now to make this even more insanely cool, imagine the platforms rotating in space, with characters launching from them at various angles and latching onto whatever is in their straight flight path. COOL! =D

Forest Fortress - Ewoks meet old US forts in giant redwoods of forest moon Endore.

## **OBJECTS**

### **PLAYER ACTIVATED**

CONVEYOR BELTS - Move any unit at a fixed rate - unit can move with or against conveyor direction for extra or less speed. Conveyor belt should have a looping middle section that can animate in either direction, and bookend pieces if the belt exists at the edges of any platforms.

CONVEYOR BRIDGE - Run on conveyor to extend bridge (more players helping the faster it extends). This switch mechanism is a conveyor belt with an indicator light of some kind to tie it into what it switches (in this case, an extending bridge). The bridge should extend outwards and allow for a length equal to a half screen in length.

CONVEYOR GATE - Run on conveyor belt to rotate gate to form platform (more players rotate faster). This is a platform rotate in the Z axis to form a wall or gate, that can rotate 90-degrees to form a ground platform (and “open” the gate).

WEIGHT GATE - Open gate by standing on platform (more players drop platform faster). This is a switch mechanism that acts like a scale.

FLAG PADS - Should be able to display up to 4 flags and indicate such through color representations of the flags in possession. Generate various unique-looking versions that provide unique tactical information to the controlling team, such as detailed mini-map (instead of detailed for only on-screen elements), enemy health indication, enemy trap indication, destroyable terrain indication, etc. Each Flag Pad should have a theme so players can recognize its significance at a glance.

OIL DRUMS - Very few hit points and very explosive doing 400 HP damage when adjacent and damage value scaling to 0 HP at radius equal to 3x Oil Drum collision box (height = 20% of character height)

HEAVY CRATES - Serve as cover and can fall to do dropping damage; 500 HP and break apart when destroyed (height = 60% of character height)

CANISTER CRATES - Same as Heavy Crates, but house mini Oil Drums that fall out with gravity when crate destroyed (height = 60% of character height)

SUSPENSION BRIDGES - 1000 HP and last point to take damage before being destroyed splits rungs that fall with gravity, dropping anything on them

ELEVATORS - Move up/down or left/right at fixed rates and cannot be destroyed

JUMP PADS - Spring boards that launch character into their Jump Loop animation frames; variable launch spring that takes character weight into consideration

WARP PADS - Each warp requires 2 pads; a start and an end pad to transport a character from and to; telefragging is possible

FLOOR SWITCHES - White floor switches activate shield boxes that spring up from the ground. The shield box cover should be noticeable before they are activated, so the player knows where the switch will activate the shield.

PUNCH GATES - Vertical doors that swing down (hinges at bottom) and extends its length (doing damage to any units under it when it falls). Depending on map placement, these can be located on a straightaway floor, then simply open to offer passage. However, if placed at the end of a break in the floor plane, some gameplay is offered depending on which way the door is knocked open - hitting the gate from the ground plane outwards opens the gate and provides a bridge to the other side; whereas hitting the gate from across the ravine knocks it open on top of the ground, thereby leaving the ravine to cross, requiring players to jump across the ravine.

DRAWBRIDGE - Level is constructed to provide one main through route that requires a switch inside the gate to be activated for the big bridge to fall. High jumping and faster units can get over the wall and activate the switch for the army of allies to "storm the castle."

TRANSPORT - With guns (ship travels behind FG plane and guns shoot as normal, but can be shot as well). pilot is first to enter vehicle, ship falls as if unpowered when not piloted (unless on the ground already). 1 player per gun battery. ejection launches pilot's pod or gun pod (for pilot or COMMANDOs). No player should have nothing to do while moving in transport. transport moves a little faster than ATV. transport itself has no health, but pods have 500 HP each. destroying gun pods adds smoke trailing from their gun spots, but if pilot pod is destroyed, ship falls as if unpowered (gun pods can eject). Controls include pilot controls (move ship left/right/up/down with physics so moving forward should make moving backward more of a "break" movement instead of instant back), COMMANDO controls (mouse to orient cannon and left click to fire) and eject for all (use jump control = spacebar). Explain Transport vs. Transport conditions + hitting map border or other collisions.

TRAINCAR - Moves on tracks that have no collision for anything else (just behind FG plane) and tracks make all sorts of cool shapes for interesting and fast movement. track splitter (split is upwards or downwards) can be shot to change track direction. car moves very fast - 2x ATV at least. should provide no cover as it's just a moving platform. should place track splitters after straight-away so unit with low shot angle range can hit it. jumping can allow for exiting car if jumping away (can perform the classic riding horse jump over the tree branch).

HOMING ROCKET - (player controls rocket and controls detonation - detonates automatically on impact with map border). if player attacked while manning rocket battery, he/she will see his/her health going down.

SLIDING WEIGHTED DOORS/FLOOR PANELS - Doors (up/down) and Floor Panels (left/right) - player activates via switch mechanism

## AUTO ACTIVATED

HALL BEAM - Vertical beam of energy that flashes as a warning then shoots between floor and ceiling for a fixed duration, then rests for a fixed duration, and so on. The beam does damage if touched, but also blocks all shots when active. Character may pass through but will sustain heavy damage (i.e. 500 points of damage).

ROCKET LAUNCH - Giant floor plates swing outward from each other and block both directions of movement on every floor of the level so a giant ROCKET can launch upwards. Once ROCKET has passed, each set of doors can slam closed. To solve collision issues for units anywhere over the floor plates when they open, maybe their opening is prefaced by a flash of light that pushes any units inside outward (to whichever side they're closest to at the moment the light starts), followed by the floor plates opening. A countdown voice like in Alien with steam shooting at various levels would be cool, as well as ROCKETS in the background launching as well.

TITANIC - Entire floor rotates 90 degrees at a time with delays in between rotations. Units on floor will slide and fall per physics (only hope is to avoid far-below floor at time of rotation, or if on this platform when rotating, to land on platforms to avoid falling full distance to ground).

SENTRY GUNS - Automatically shoot base flag enemy if within screen distance (doing 10 HP damage per bullet @ 4 bullets/sec.). If base has no flag, guns fold into ground and remain inactive until a new flag is planted.

BARRIER CANNON - Blocks path when elevated. players must disarm both sides for it to lower again.

MAINTENANCE CARTS - with dim spotlights hanging from tracks above (see video) - can serve as a moving platform if mounted from above.

CARGO ELEVATOR - moves automatically - big enough for a group of allies & enemies) that moves up, but can move sideways as well (and act as moving ground)

TRAIN - (coming out of screen) - serves as background visual until it comes out of the screen, at which time it is an invincible barrier that stops shots and movement until cars conclude run out of screen. (how does it look coming into close fg???)

BG SPIDER WALKER - in bg city shooting beams around city then every once in awhile into FG (spotlight shines to target location then flashes to warn of impending shot). any characters in beam when it strikes are either killed or sustain 500 HP damage.

TUNNEL - left to right tunnel - shots only pass left-right through tunnel, otherwise they collide with the invincible tube sides. (can look like a tunnel from the side, or just platforms above and below characters that feel "tighter" like a tunnel). Glass version can have portions blown at with shattered glass for a nice visual/audible effect.

## REFERENCE

### CODE

### OFFSETS

Please refer to [Offsets.xls](#) for detailed information about any offsets in objects.

Model Name	Node			Value			Purpose	Notes	
	Name	#	Position?	Offset?	X	Y			Z
JET-V	CODE008_NULL46	54	X		0.0m	0.774m	8.746m	root for rotation/movement; anchor for GUN-G bottom-mount (center)	currently root node is at origin (so if moved, move ROBO-V riding model's root as well)
JET-V	CODE009_NULL47	60	X		-6.181m	0.795m	8.743m	anchor for GUN-G bottom-mount (right)	
JET-V	CODE011_NULL49	67	X		6.182m	0.798m	8.753m	anchor for GUN-G bottom-mount (left)	
GUN-G	ROOT_GUN-G	0	X		0.0m	-1.494m	2.042m	root (where ground level is)	
GUN-G	_GUN_PIVOT_wing	1	X		0.0m	-0.456m	8.865m	attach to JET-V bottom-mount (left, right or center)	
GUN-G	_GUN_PIVOT	2	X		0.0m	-0.362m	4.111m	rotation anchor for shooting/aiming	
GUN-G	_GUN_PIVOT_shoulder	3	X		0.0m	1.34m	4.111m	rotation anchor when shoulder-mounted on JET-V	
ROBO-V	ChestCaseL	25		X	0.0m	0.0m	1.89m	offset for root when attaching GUN-G to left shoulder	
ROBO-V	ChestCaseR	4		X	0.0m	0.0m	1.89m	offset for root when attaching GUN-G to right shoulder	
ROBO-V	CODE000_All09	1	X		0.0m	3.891m	15.336m	anchor match point when riding JET-V	currently root node is at origin (so if JET-V root moves, moves this as well)

### HEIRARCHY RULES

Please refer to [Heirarchy\\_Rules.txt](#) for detailed information about how hierarchies should be used.

**ART**

**ANIMATION**

Please refer to [Animations.xls](#) for detailed information defining all animation.

CHAR	MAX Start	MAX End	Animation	Script Start	Script End	Comments
<b>Source MAX file = ALL.max</b>						
JET-V	11	29	afterburner	11	29	use if afterburner hit (also if GUN-G's mounted play GUN-G's afterburner anim) - hold last frame for afterburner idle
JET-V	30	81	transform2robo	30	80	user exits jet form 1st frame of Land anim
JET-V	82	120	transform2jet	82	119	user must jump then transform when starting from robo form
JET-V	121	200	idle	121	200	in flight
JET-V	201	210	accelerate	201	210	when accelerating from 0 (or a slow speed) - also use for reverse
JET-V	211	221	go	211	220	when boost of speed kicks in (not afterburner) - play idle next
JET-V	222	250	turn	222	249	turns 180-degrees to face opposite direction (flip next anim to match)
JET-V	251	300	die	251	300	play explosions at random joints rapidly and repeatedly
JET-V	301	310	2mode4robo	301	310	configures so ROBO-V can ride it (play ROBO-V's 2jump2ride also)
JET-V	311	320	3modereturn	311	320	returns to normal fly mode (play ROBO-V's 3jumpout also)
JET-V	321	330	gethittop	321	329	--
JET-V	331	340	gethitfront	331	339	--
JET-V	341	350	gethitback	341	349	--
JET-V	351	360	gethitbottom	351	359	--
ROBO-V	1	30	idle	1	29	--
ROBO-V	31	60	move	31	59	moves .3 meters per frame
ROBO-V	62	79	turn	62	78	turns 180-degrees to face opposite direction (flip next anim to match)
ROBO-V	80	98	dash	80	97	shoulder smash with short burst of speed (must be moving already)
ROBO-V	99	109	jump	99	109	stretch between frames 104 and 109 to lengthen jump time / rotate if user turns in midair
ROBO-V	110	135	land	110	134	start blend at 124
ROBO-V	136	145	gethitfronthigh	136	144	start blend at 138
ROBO-V	146	155	gethitfrontlow	146	154	start blend at 148
ROBO-V	156	165	gethitbackhigh	156	164	start blend at 158
ROBO-V	166	175	gethitbacklow	166	174	start blend at 168
ROBO-V	176	185	gethittop	176	184	start blend at 178
ROBO-V	186	195	gethitbottom	186	194	start blend at 188
ROBO-V	196	226	push	196	225	use for pushing obj or pushing up against a wall (8-17m vertically)
ROBO-V	227	280	die	228	281	--
ROBO-V	281	283	rideidle	281	282	Ride JET-V
ROBO-V	284	299	ridegethittop	284	298	--
ROBO-V	300	313	ridegethitfront	300	312	--
ROBO-V	314	325	ridegethitback	314	324	--
ROBO-V	326	338	2jump2ride	326	337	From ROBO Jump; (play JET-V's 2mode4robo also); MATCH last frame in previous jump anim by OFFSETTING ROOT Y=-8.459m Z=-13.456m from origin
ROBO-V	339	350	3jumpout	339	349	To ROBO Jump; (play JET-V's 2mode4robo also); OFFSET ROOT of subsequent 1st frame of land anim Y=-5.186m Z=-4.257m from origin
ROBO-V	351	380	ridedie	351	380	Death while riding JET-V
ROBO-V			recharge4energy			
GUN-G	0	0				POSE base REFERENCE ONLY
GUN-G	1	1				POSE jump REFERENCE ONLY
GUN-G	2	2				POSE gun REFERENCE ONLY
GUN-G	10	50	transform2gunground	10	49	Use in most cases - for basic transform from ROBO-G to GUN-G
GUN-G	51	91	transform4ground2robo	51	90	When transforming, move up if shoulder-mounted, or move down if wing-mounted.
GUN-G	92	132	transform2gunmounted	92	131	Use when transform initiated while combining to wing of JET-V or shoulder of ROBO-V
GUN-G	133	173	transform4mounted2robo	133	172	When transforming, move up if shoulder-mounted, or move down if wing-mounted.
GUN-G	174	204	idleground	174	203	
GUN-G	205	235	idlemounted	205	234	
GUN-G	236	266	afterburner	236	266	Play if mounted and JET-V activates its afterburner
GUN-G	267	269	idleafterburner	267	268	Play if mounted and JET-V holds its afterburner
GUN-G	270	300	turn	270	299	Ground only (mounted cannot turn); flip next anim 180-degrees
GUN-G	301	310	gethitfrontground	301	309	play when in ground mode
GUN-G	311	320	gethitbackground	311	319	play when in ground mode
GUN-G	321	330	gethitopground	321	329	play when in ground mode
GUN-G	331	340	gethitfrontmounted	331	339	play when mounted to wing or shoulder
GUN-G	341	350	gethitbackmounted	341	349	play when mounted to wing or shoulder
GUN-G	351	360	gethitbottommounted	351	359	play when mounted to wing or shoulder
GUN-G	361	370	gethitfrontafterburner	361	369	play when mounted to wing and afterburner is engaged
GUN-G	371	380	gethitbackafterburner	371	379	play when mounted to wing and afterburner is engaged
GUN-G	381	390	gethitopafterburner	381	389	play when mounted to wing and afterburner is engaged
GUN-G	391	400	gethitbottomafterburner	381	399	play when mounted to wing and afterburner is engaged

**PRODUCTION RULES**

Please refer to [Production\\_Rules.txt](#) for detailed information about rules to follow in production.

**MEMORY USAGE**

(NOTE: Please refer to [memory\\_calculator.xls](#) for a real-time calculator to determine poly/texture output memory.)

**GEOMETRY (UV MAPPED)**

vertex total \* 24 = x bytes

poly total = y bytes  
 x + y bytes = total geometry bytes

#### TEXTURE

-----

WIDTH x HEIGHT X 3 = 24-BIT PCX  
 WIDTH X HEIGHT X 4 = 24-BIT PCX WITH ALPHA

#### ANIMATION

-----

frame total \* node total \* 15 = total animation bytes

### POLYGON ALLOCATION

Characters = 40,000(16\*2500 polygons each)  
 FG Terrain = 4,000  
 BG Terrain = 1,000  
 Objects = 2,000  
 Effects = 2,000  
 Miscellaneous = 1,000

TOTAL = 50,000 polygons

miscellaneous math notes

-----

400 frames \* 80 nodes \* 15 = 32000\*15 = 480,000 bytes = 48 Kb  
 2000 verts \* 24 = 48 K  
 3000 poly \* 12 = 36 K  
 132K

### POLYGON TOTALS

The following outlines a polygon limit guideline for assets in the game:

CATEGORY	POLYS
FG Terrain	6000
BG Terrain	2000
Characters	32000 (16x2000)
Objects	5000
Effects	2000
Miscellaneous	3000
TOTAL	50000 polygons

### CHARACTER OBJECT PLANNING

In order to provide IK and FK for the humanoid and transformed versions, respectively, 4 total characters in 1 3DS MAX file are required, including:

Jet in Robot form with human skeleton  
 Gun in Robot form with human skeleton  
 Jet without skeleton (includes transformation to/from robot form)  
 Gun without skeleton (includes transformation to/from robot form)

Each of the four types animates on a separate layer in Max.

All characters and their animations, upgrades, etc. are contained within 1 MAX file. Keep this file backed up and increment

## MAP MAKING

Maximum of sixteen players at a time, eight per side. On average, four players on-screen seems to be a good target number to maintain in order to insure adequate gameplay activity between players. By adding more NPC elements, this number can be reduced slightly, but no fewer than 2 characters per screen should be the rule of thumb for map-making.

### STANDARD MAX TILE SIZE FOR MAP

30Wx30Dx15H is considered a standard tile size (1 game unit) supporting all characters. Within this 30x30m space, the center 16 meters (Clear Area) should always be clear of any obstructions (unless they are destructible). The remaining outer space (Gutter Area) around it (7 meters on each side, or 14 meters total) can house extra background geometry (specifically base guns for pilots, or radar, etc.). The only exception to this rule is – never place any non-destructible geometry on what is supposed to be a clear path (i.e. don't place a base gun in the Gutter Area if units are supposed to walk over it...)

### REAL-WORLD MEASUREMENTS

The following are to be used as a guide only when constructing relevant elements in 3D:

RAILING - should be .95m off the ground

STEPS - should be .15m-.19m tall

DOORWAYS - should be 3.66m wide x 3.05m high

CEILINGS - should be 2.7m tall

RAMPS - should not exceed 19.65 degrees (8 degrees for wheelchairs)

#### SAMPLE

5 meters high

14 meters wide

ramp length is irrelevant (14.86m)

ANGLE CALCULATOR (for ramps)

<http://www.easycalculation.com/area/triangle-angles.php>

## CLOAKING

Some groovy visual effect should represent cloaking. The Recon class has the ability to cloak any allies within a given area, so the effect should apply differently for viewing by the enemy (maybe it's simply not showing the allies that are cloaked) and the allies (maybe some outline effect that shows while the rest of the sprite doesn't, or the sprites are rendered semi-transparent, or...?)

## PATH RULES

The following describes how paths work in the game:

Paths denote camera orientation, player horizontal direction (left/right). Camera will track player's position on a path and move in XZ to match.

The Y in the path is only used for sorting which PATH is closest to player and which to use if two paths overlap

When a player jumps, they move perp. to the surface they were last touching

Players will be allowed to do: UP/DOWN+JUMP to jump IN/OUT the scene (allowed but doesn't have to be used)

This would be used if a path A was from -5,0,0 to 5,0,0 and the platform above had a path of -1,0,-1 to 1,0,-1

This would allow the player to jump into the BG path

Just tapping JUMP alone without UP/DOWN would mean the player jumps in the NORMAL direction prescribed in #3 - he/she isn't attracted to the nearest path to the player's position

If one wanted to design a level where the level curved in a U shape and didn't want the player to be able to "jump paths", one would use the map collision to setup invisible borders to prevent the player from jumping paths. The camera follows the last path that was touched by the player

## **DESIGN**

### **MAP MAKING**

Every single map should provide gameplay mechanisms and consideration for mechanics of EACH CHARACTER class. We do not know which class people will play, so every map must support them all. There need to be ramps for ATVs, elevators for Cannon and Armor units, destroyable areas, destroyable objects, hazards, launch pads for fun, primary routes, secondary/secret routes, etc. Some examples of map configurations that could support various gameplay include:

- 1) Wide maps can support extended speed sections (ideal for ATV)
- 2) Tall maps for jumping, elevators and falling
- 3) Small maps for skirmishes
- 4) Large maps for all-out battles
- 5) Trap maps
- 6) Hazard maps

The size of map is measured by the number of screens it takes up. The maximum size for any arena is 8x8 screens, or 64 screens. Most do not take up anywhere near this size. On average, most take up 10-20 screens. The following outlines the process for arena creation: Three files are used to create each map:

- MICRO\_8X8\_all.psd - contains all screen layouts for maps (each white pixel represents 1 screen the arena uses)
- MIN\_320x240.psd - use this to blow up the 8x8 design to 320x240 proportions (w/ nearest neighbor pixel interpolation selected). Each pixel here should represent a map unit for platform collision, walls, etc.
- MAX\_5120x3840.psd - all maps blow up to these proportions from the 320x240 size. Each pixel from the 320 size is now 16x16 pixels (the smallest platform collision unit size)

### **KEEPING IT FUN**

DEAD TIME AVOIDANCE (START UP) - Start all characters facing their enemies and no more than 1 screen away from at least 1 enemy, unless objective is to find the enemy

DEAD TIME AVOIDANCE (DURING ROUND) - Initiate BG terrain gameplay interaction (i.e. spider walker eye beam) if character is not faced with an enemy or hazard for more than 7 seconds.

INACTIVITY - If a character is inactive for more than 20 seconds (meaning without any player input) an empty power-up bot will spawn nearby and proceed to nibble on the character, draining its life energy, and storing this in its orb as a power-up. The bot will stop once the character is dead, in which case it walks away, or the player has engaged the controls, in which case it runs away.

TEAMKILLERS - This is avoided because there is no friendly fire (it's a shooter and gets too complicated and not fun if there is friendly fire!).

### **DESIGN GUIDELINES**

Keep the following in mind when designing:

- Players need to move around easily and not get frustrated by getting STUCK on anything!
- Players need to move at a rate that is satisfying, but able to upgrade that rate to something even more satisfying.
- Players need to shoot easily and know when they'll hit or not hit a target.

Things players should have fun doing often:

- Transforming for different gameplay
- Combining for team gamplay

- Capturing Flags as Pilots
- Recovering/Defending Flags
- Upgrading Weapons
- Collecting Power-Ups
- Collecting Energy Cells
- Killing enemies

Offensive & Defensive Upgrades for:

PILOT Bazooka

ROBO-V Gun stuff (scope, long-barrel, twin-barrel, etc.)

ROBO-G Sword stuff (saw, pronged, double, etc.)

JET-V Gun stuff (cannon attachment, long-barrel, etc.)

GUN-G Gun stuff (extender, twin-barrel, triple barrel, etc.)

Energy - players start at 80%

Collect energy to reach and exceed 100%

## GAMEPLAY INSPIRATIONS

Pacman, Macross, Streetfighter, Gunstar Heroes and Battlefield 2

Shooter, Platformer, Action, Adventure

## SOUND DESIGN

Please refer to [Sound Design.gif](#) for more information.

## MAP ONE : ROCKET BASE

This giant factory is moving through an asteroid belt. Huge, curving, iron beams stretch from top to bottom like a robotic rib cage in this multi-level base of operations for long-range offensive ship. Central to the base is a giant missile tube which activates every few minutes. Once activated, alarm sirens blare and the central walkways rise up like draw bridges to make way for the impending launch sequence. While the walkways are raised, they act as walls separating the arena into two distinct halves. Only air units may pass between either side at this time.

3 screens wide x 2 screens tall

Symmetrical design for the basic structure, but details and objects add variance.

3 levels of height for platforming

Incorporates and/or should support the following elements:

GUN-G - firepower

JET-V - speed/flight

ROBOS - platform action

CONVEYOR BRIDGE - left side of map

WEIGHT GATE - right side of map

OIL DRUMS - for strategic damage infliction

CANISTER CRATES - for strategic damage infliction

JUMP PADS - located on the top level

HOMING ROCKET - power-up

ROCKET LAUNCH - sequence described above

SENTRY GUNS - 2 guns guard each base