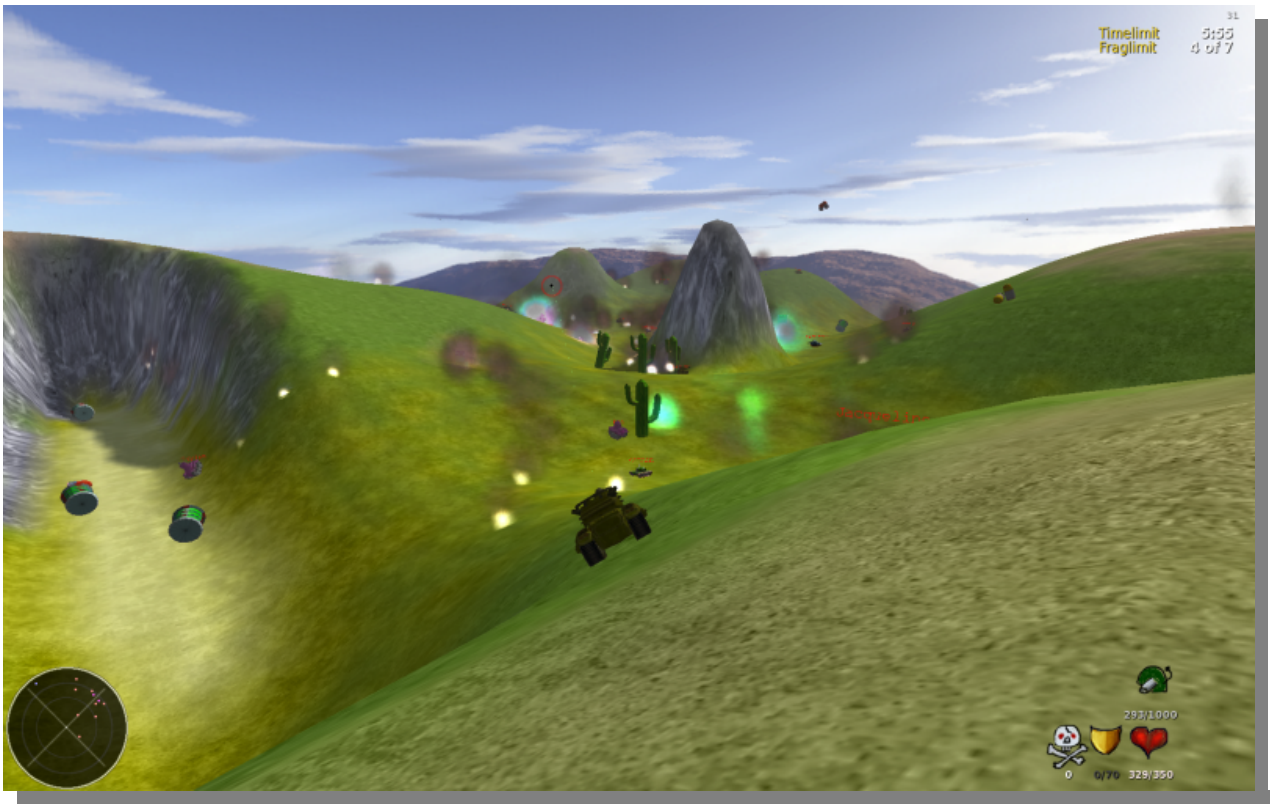


BJS User's Manual



Welcome to BJS. Welcome to the greatest fight competition in the world. This is the fight where only one man can survive. All players prepare your machines... What? You are not prepared yet? So please continue reading and don't bother us. All others... Readyyy! FIGHT!!!...

Welcome player. Do not listen them. Because of their pride they have totally forgotten that everyone must begin his journey from the scratch. We will now teach you basics and after that, you must improve yourself in the battle. So do not waste the time, we have much work to do!!!

Hardware and Software Requirements

- Microsoft Windows 2000 SP4 or Microsoft Windows XP with SP 1 or 2

  It is also possible to run the software under Linux[1]
- 1 GHz processor
- 256 MB of RAM
- 100 MB of free hard drive space + recommended at least 512 MB for page file
- Graphics accelerator and driver that supports OpenGL 1.5 and has at least 4 texture units. It is nVidia GeForce FX5200 and better or ATI Radeon 9500 and better
- OpenAL 1.1 compatible sound card. Note that nVidia nForce 2 ALU (MCP-T) is not supporting this even the driver tells it is compatible. If you have this adapter, please select the Generic Hardware or Generic Software in the OpenAL device selection setting
- LAN or WLAN (TCP/IP) for network play. 10Mbps bandwidth is recommended

1 Currently only x86_32. Users reported some problems on x86_64.

Installation

Windows

The installation is really easy. Just doubleclick the file Installer.msi and follow the instruction. You only select the installation directory and everything else will be done automatically. At the end there will be installed OpenAL runtime. Please follow instructions of that installer, too.

Linux

Currently we don't provide any binary package for Linux. We provide only sources and a really simple Makefile. The sources are almost ready for classical installation using make install but the Makefile is not able to install the game yet. If you want to run the game under Linux you should be able to compile a program or a library. Note that currently we don't support 64bit since we have no opportunities for testing. Your help is surely welcome.

First you needed to get all libraries used by BJS.

1. SDL , SDL_image, SDL_mixer, SDL_ttf (http://www.libsdl.org) These SDL* libraries are probably included directly in your Linux distribution.
2. SDL_gfx (http://www.ferzkopp.net/joomla/content/view/19/14/) Easy to compile if not in distribution.
3. Be sure to have a direct rendering and development packages for OpenGL. You get these files from nVidia or ATI. It depends on your hardware. Or sometimes the packages are already included in the distribution.
4. OpenAL and ALut. (http://openal.org) Maybe included in your distribution. If not the compilation from sources should be easy. If you have problems with OpenAL or ALut it is possible to compile the game without OpenAL and ALut.
5. OmniORB (http://omniorb.sourceforge.net) Probably included in your distribution. If not the compilation should not be a problem. In case of compiling the library yourself check the version and install 4.1 or you have to install also application omniidl.
6. ODE (http://ode.org) If you have ODE in your distribution it is highly probable that it is an outdated version and compiled with wrong options. Download the latest ODE and in configure step use options –enable-double-precision and –enable-release.
7. CEGUI (http://www.cegui.org.uk) You need latest version 0.5 and it is almost sure that you will have to compile the library since version 0.4 common in distributions is not compatible with BJS. Fortunately compilation isn't difficult.

After installing all the libraries you may compile the game. Order of make commands follows.

- make -s -k depend
- make idl % If you don't have omniORB 4.1
- make -s -k

If you have dual-core CPU you may try make -s -k -j2 and speed up the compilation. After successful compilation start the game using ./bjs

Menu

When you run the game, you'll get into the main menu. It will look like this:



The meanings of the buttons are:

1. Starts a single player game server and connects you to it. No one but you can connect to the server launched like this.
2. Allows you to connect to some server that is already running or you can create a multiplayer server easily.
3. Opens the sub menu with configuration of the program.
4. Displays information about authors.
5. Quits the program.

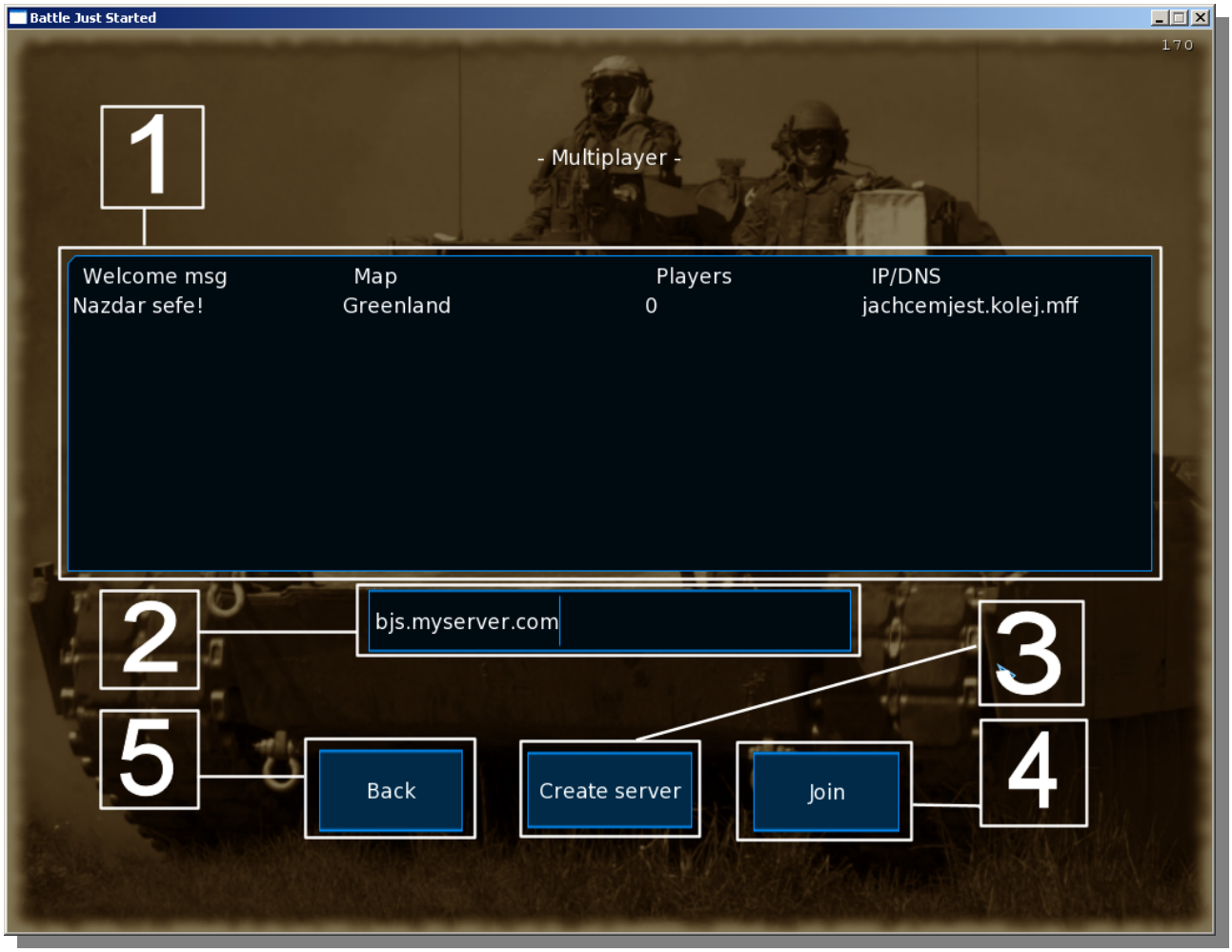
Single Player Menu



You can see following controls in single player menu:

1. List of available maps. Name, file and maximum number of players is displayed.
2. You can set the number of computer opponents that will meet you int the game.
3. Here you can set fraglimit for this map.
4. And timelimit (in minutes)
5. By clicking this you return to the main menu.
6. By clicking this button the server will be started and you will connect to it.

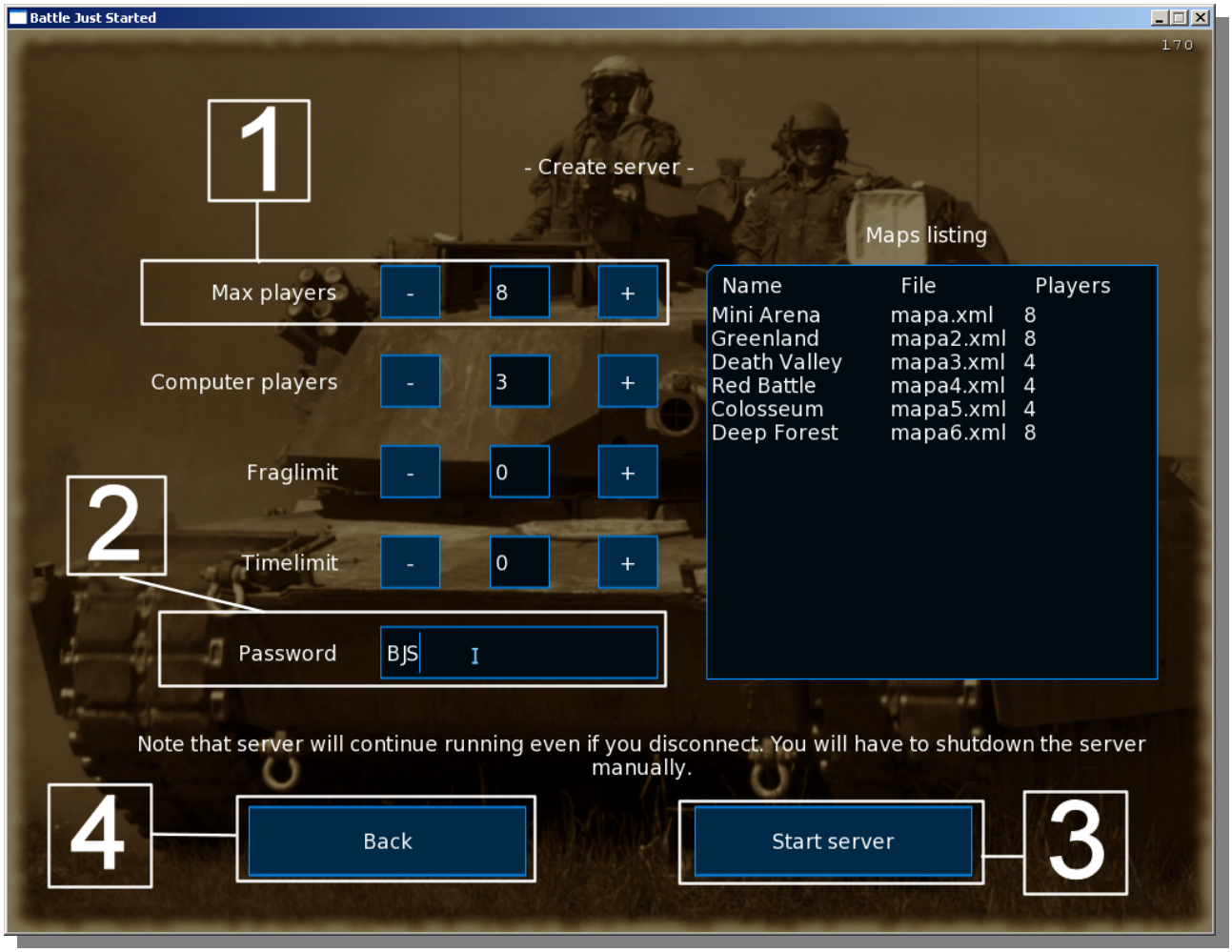
Multi Player Menu



From this screen you will connect to enemies server or challenge your foes:

1. Here you can see list of servers running on the LAN. You see server's welcome message. Map, number of players connected an address of that server
2. Here you can enter specific address to connect
3. This button opens new sub menu with option to start multiplayer server
4. After clicking this button the game will try to connect to specified server
5. Returns you back to the main menu

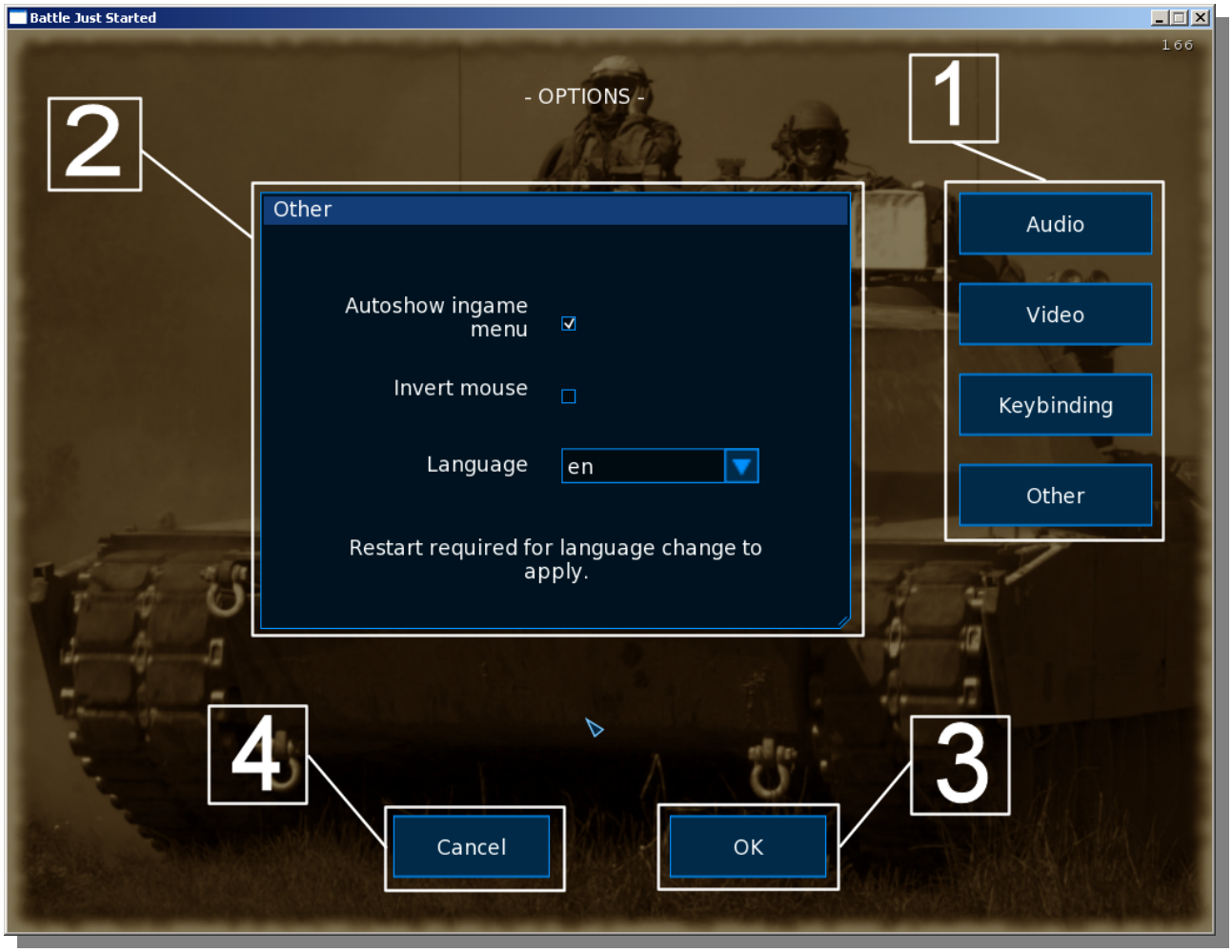
Create Server Menu



Here you can start server for the play of more players. Controls are similar to that from single player menu, so we describe only differences:

1. Maximum number of human players. Computer players are in addition to this number.
2. This will be administrator password for the server.
3. By clicking this button you launch the new server and connect to it.
4. Return to the multiplayer menu

Options Menu



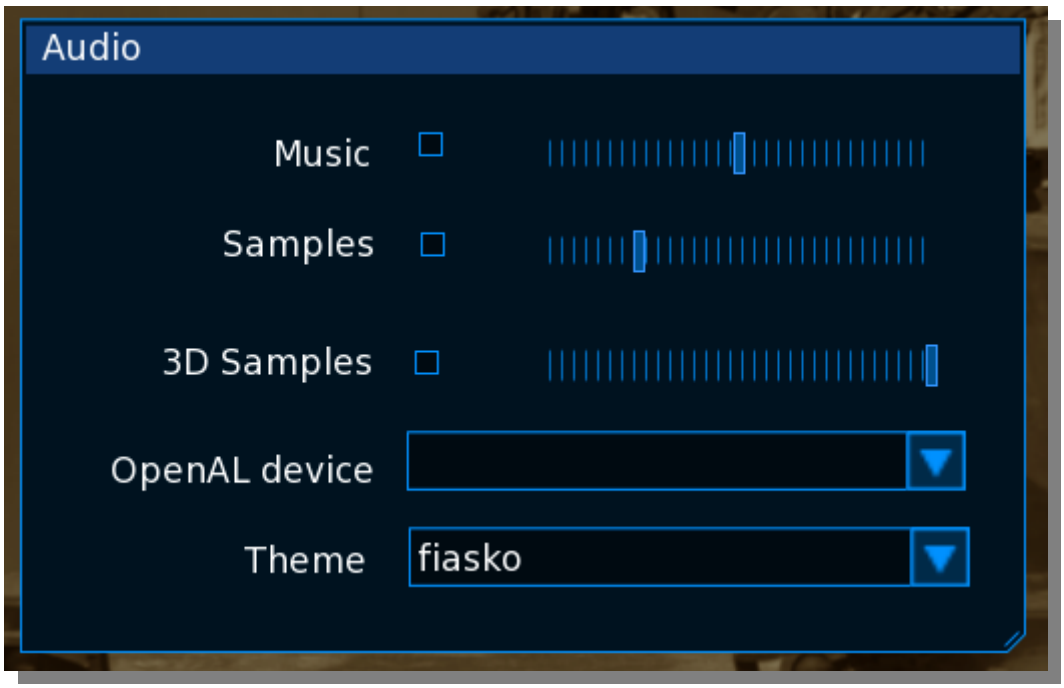
In this menu you can set most of tunable parameters of the game. You select the type of changes you want to make and then you can change them easily. The main option windows has these components:

1. Here you select type of changes – changes of sounds and music, video setting, controls and other settings
2. In the centre of the screen there will be windows with available options
3. Accept the changes and return to main menu
4. Cancel the changes return to main menu

In the screenshot you can see Other settings – you can change here:

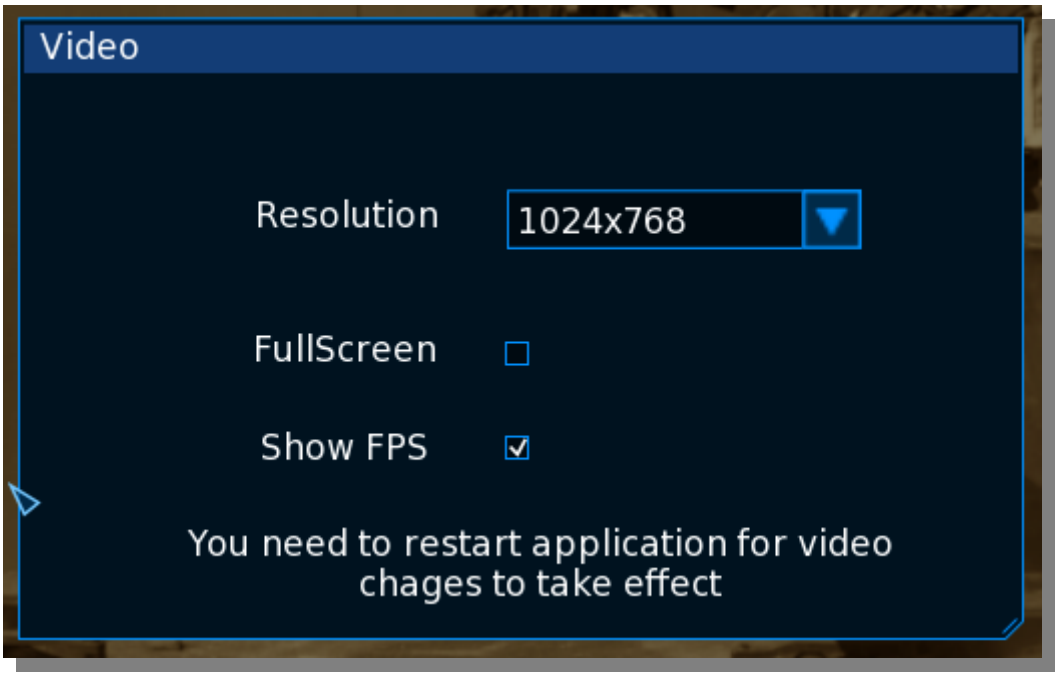
- if you want to see ingame menu automatically when you connect or your tank is destroyed
- if you want the mouse to be inverted
- language settings

In Audio settings you will find something like this:

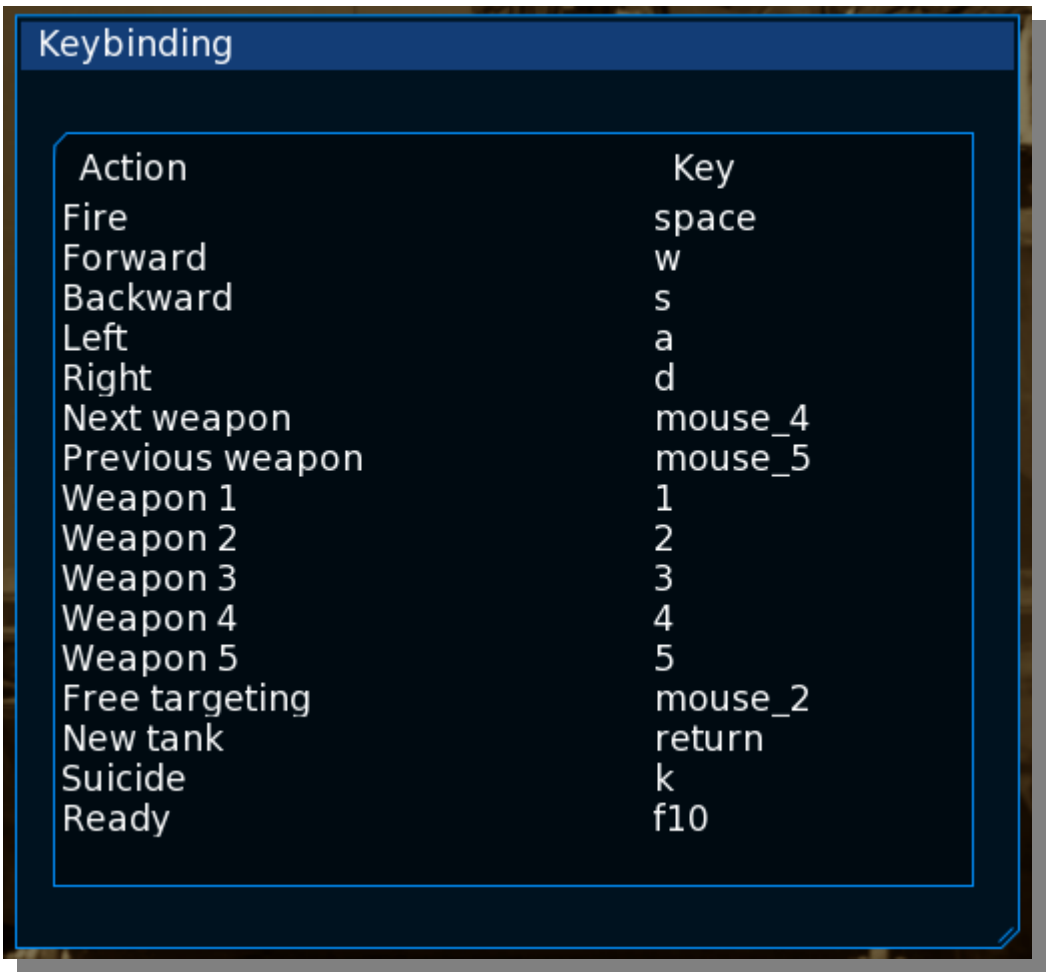


You can turn on/off music, and sounds both for normal stereo and 3D sounds. Ayou may also select OpenAL device and sound theme. If you have problems with 3D sounds, please experiment with device settings.

The next really important is the Video settings window. You can choose resolution, fullscreen mode and if you want to see the framrate.



In the keybindings window you may adjust the controlling of the tank and other keybord and mouse inputs.


Keybinding
Action
Key
Fire
space
Forward
w
Backward
s
Left
a
Right
d
Next weapon
mouse_4
Previous weapon
mouse_5
Weapon 1
1
Weapon 2
2
Weapon 3
3
Weapon 4
4
Weapon 5
5
Free targeting
mouse_2
New tank
return
Suicide
k
Ready
f10

Game Interface

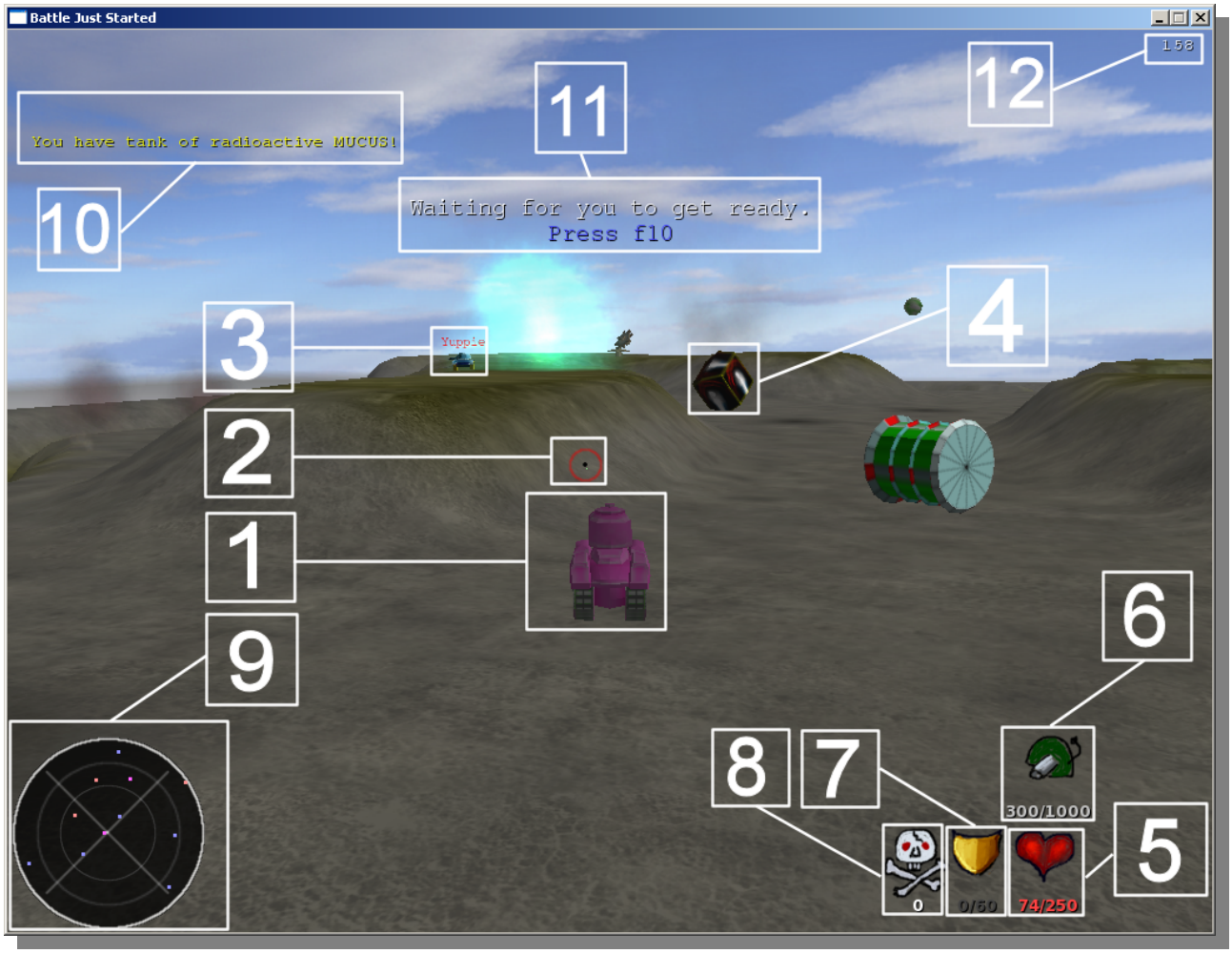
If you connect to the game, you can expect to see something like this:



You can choose your name and tank. You also starts to play here or disconnects from the server. Explanation of controls:

1. Your name – it will be displayed over your tank (for other players)
2. Your tank. Choose very carefully! There are very powerful tanks, but they have certain weaknesses like worse manoeuvrability or top speed compared to the lighter tanks
3. When you click this button you will get your tank and can start playing. Note that this button is disabled if you have tank already
4. Disconnects you from the server
5. Quits the program

After you chose your tank, you will see something like this:

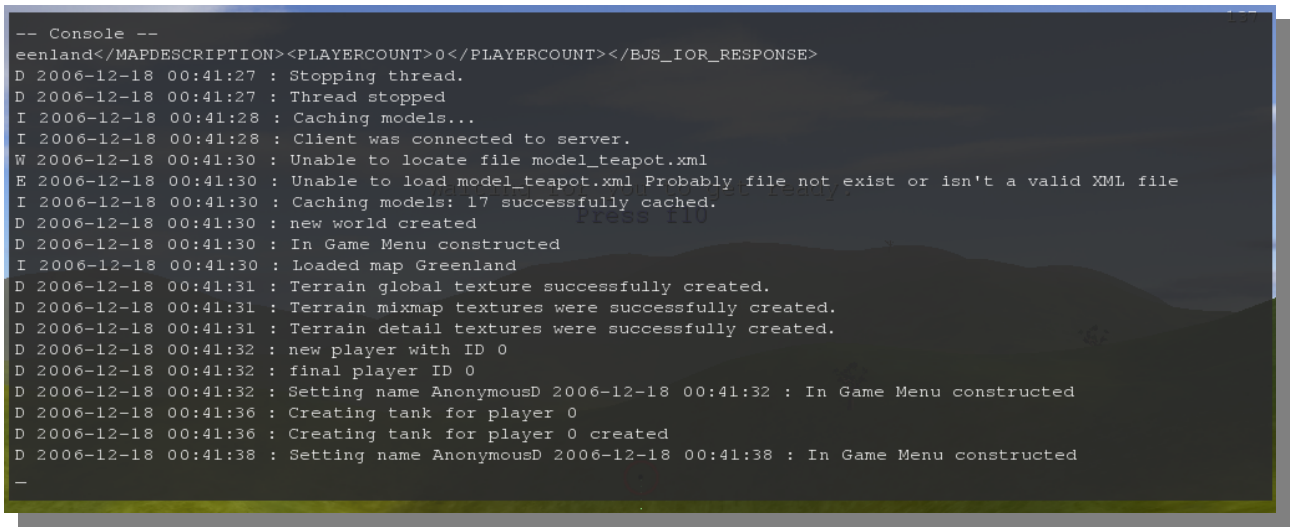


We will explain what is what on the main game screen:

1. Your tank. KEEP IT ALIVE!
2. Your gunsight. It should point to the enemy tanks, not just to the ground!
3. Your ENEMY! Kill them all!
4. This is bonus box. It carries some fine power up! Try to take it before the others
5. Your hit points. Its vital to have this positive
6. Your current weapon and state of ammunition
7. Your armour – the more the better. It makes enemy projectiles harder to penetrate your tank
8. Number of kills you made
9. Radar
10. Chat and messages from server
11. Gameplay messages
12. Framerate display

If you play and the game is in phase of live scoring (see Game Rules section for details), in the top right corner there will appear what you must fulfil to win the map.

Settings of the game you may change or view (or administrate the server) by the console that appears after you pres '~' key (default).



And now we will describe how you can see how good you are. The stats windows is tool for that.

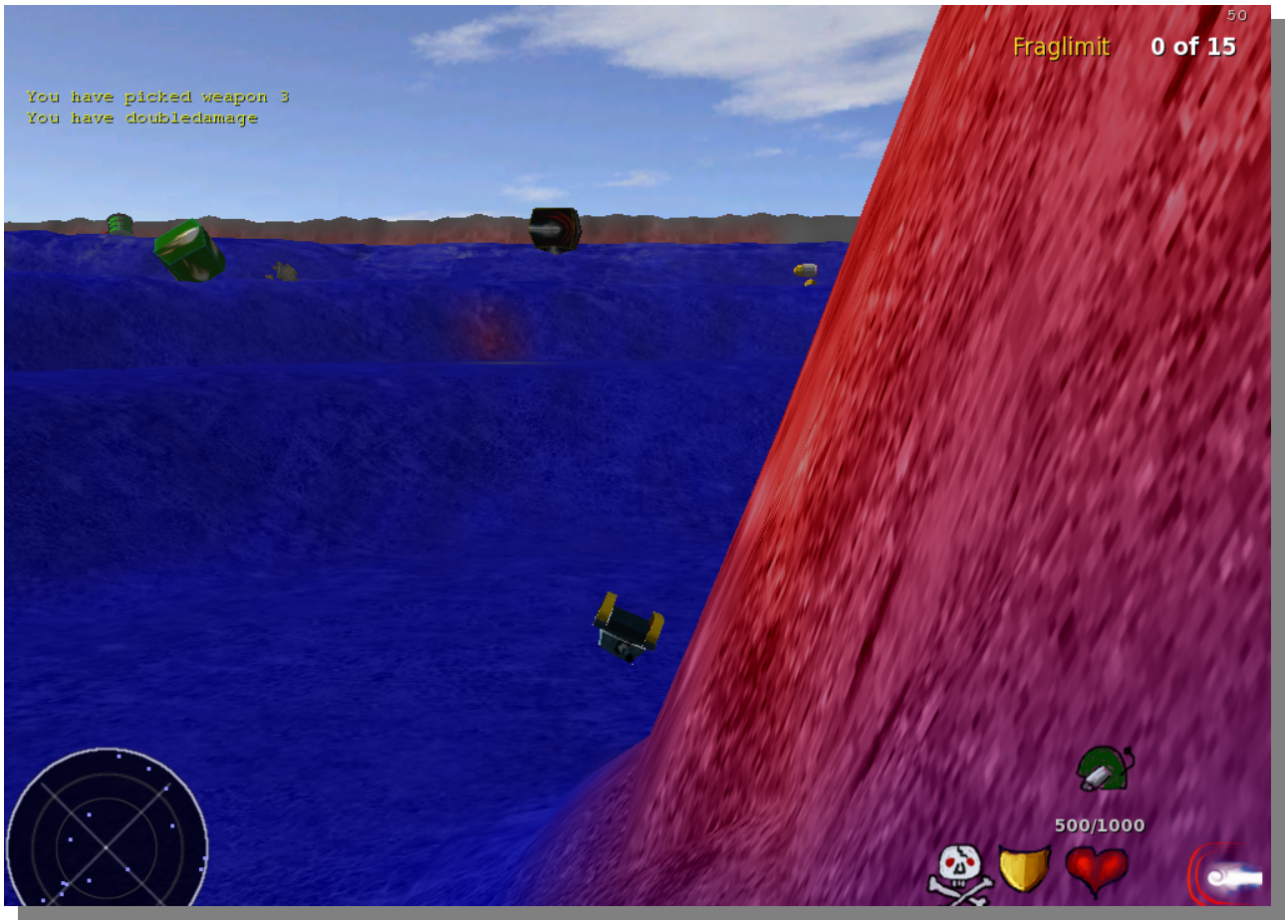


Try to be always first in this window! The players are ordered by the score and you are highlighted by the green colour.

Movement, Targeting and Firing

Oh young Anakin! You want to be the fastest man in the field and have aim like Robin Hood... eh that's another story. Ok, let's look into it.

Movement is basic. Remember that. If you stay like chicken in front of hen-house, you will be shot in a second. Try to keep moving at all cost. When you have someone behind your back, change direction and watch bonuses around you. Health, armour and speed are very useful in this situation.



Yes, I said that it is good to keep moving at all cost but you must take care where you are heading. High mountains are not best place for full throttle ride. In our world, there is one thing that is called physics or something like that and if you do not care, your tank is falling and rolling in the twinkling of an eye. Yeah, driving is not easy but I think you can handle it.

Oh, you are scared... That was easier part of this lesson. Now truly art comes, aiming. To be master in this art you must train from dusk till dawn every night. I can give you a few tips but the rest is up to you.

First you should learn to aim in two different mods. First view shows you where is your tank heading and gives you chance to kill all enemies in your view angel. Second mode (push middle mouse button or hold right mouse button if you use default key bindings) gives you chance to kill enemies that are behind you.

When you fire some bullet it takes time when it get there where you want. So aim little bit before enemy to get him.

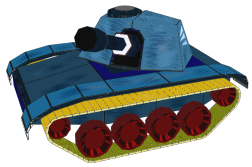
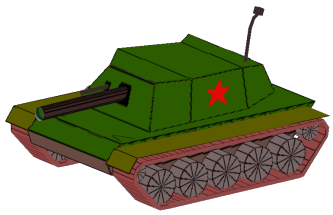
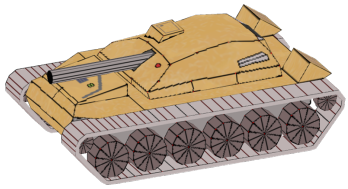


Use different ammo depending on distance. Take down long ranged targets with your radius damage bullets and sprinkle them with fast gun when they get closer. Use radar as your advantage.

That's it. I have not nothing more to tell you about this. You can get much more experience by practising so do not stand here and go.

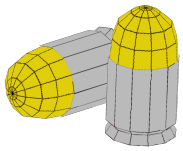
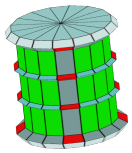
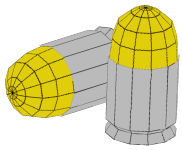
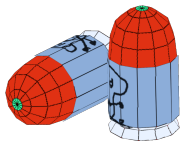
Tanks

Here is the description of your battle instruments. Read carefully!

	Name	HP	Armour	Speed	Turning	Engine
	Barracuda	200	40	75	90%	1000 kW
	Anaconda	250	50	65	85%	1000kW
	Tiger	250	70	60	85%	1200kW
	Pink Pantheur	250	60	65	80%	1100kW
	Lion	350	70	70	45%	1400kW

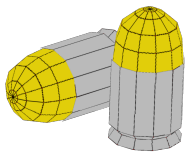
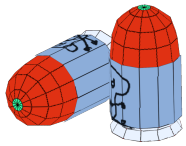
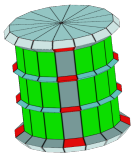
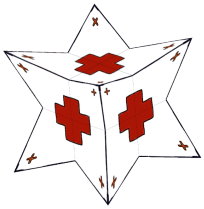
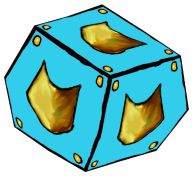
Weapons

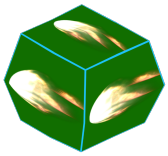
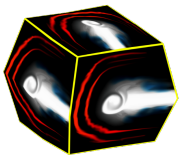
Chose your weapons well! Your survive may depend on that.

Gun	Ammo	Name	Cadence (per min)	Damage	Speed	Radius	Maximum amount	Piercing
		Big gun	400	20-30	450	0	1000	no
		Slizer	60	80-100	80	50	15	no
		Fast gun	1500	20-30	450	0	1000	no
		Piercing big gun	400	20-30	450	0	250	yes

Bonuses

These things are really funny... sometimes they disappear just before your nose!

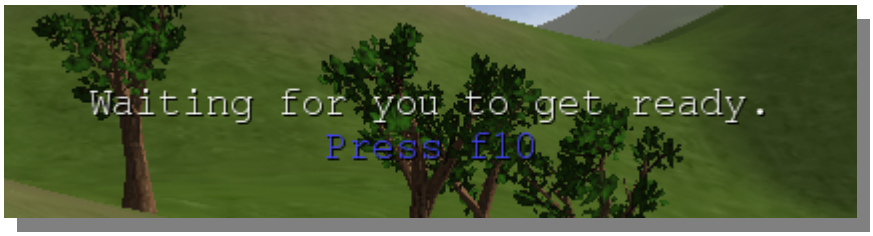
	Name	Description	Lasts for
	Basic ammo	Adds 250 projectiles	-
	Piercing ammo	Adds 200 piercing projectiles	-
	Tank of mucus	Adds 10 tanks of mucus for slizer gun.	-
	Health kit	Adds 100 hit points.	-
	Better armour	Adds 20 armour.	-
	Fast gun	Gives you fast gun.	-
	Faster tank	Increases top speed by 20%.	15 s

	Faster reloading	You fire two times as fast.	10 s
	Double damage	Doubles damage of your shots.	10 s

Game Rules

This game has deathmatch mode. That means all player are in the game and every one plays for himself only. The task is to have the best score at the end of map. The score is calculated as the number of other tanks that you kill minus count of your own suicides. Suicide is when you hit yourself or you press K key (default) to get killed yourself. When you fall down from the map it is not counted as suicide.

In the beginning of every map there is the phase where the score is not counted. The game is waiting while all players get ready. You let the game and others know you are ready by pressing F10 (default) key. You have also displayed message if the game is waiting for you or for the others.



Picture 1: You are not ready yet

The ready and not ready players can be distinguished by the tick in the stats window (can be viewed by pressing TAB by default).



Picture 2: Anonymous is not ready, others are

When all players are ready the map is restarted and the live play for score starts. The game ends when the timelimit or fraglimit is reached. The current status of limits can be seen in upper right corner of the display.



Picture 3: 14 kills or 3 minutes left

When some of that limits is fulfilled the game stops and displays statistics. Then after some time the next map is loaded automatically, or the administrator can load some manualy.

Camera

Show me your point of view. Oh you are shy. So today, I show you mine.

Oh now you think you know everything and can beat every one? How can you kill someone if you can't see him. Now I show you some tricks. This allows you to see behind corner.

To do this tricks you must push some magic keys. Speak with fairy named Controls (few steps deeper in forest) and she tells you what are these magic keys.

And now, show begins.



Need look closer. Here you go.

Nice middle distance view to kill everything that moves.



This look helps you see everything under hill.



When walls mean nothing.



And now comes the top secret we are going to share with you. Do you want to see even more? If the answer is yes search for the magic console command fovx

Controls

Here you can find default bindings of keyboard and mouse

Key	Action when pressed	Action when released
left	start turning left	stop turning left
right	start turning right	stop turning right
up	start going forward	stop going forward
down	start going backward	stop going backward
space	start fire	
`	console	
escape	ingame menu	
p	/pause	
w	start going forward	stop going forward
a	start turning left	stop turning left
s	start going backward	stop going backward
d	start turning right	stop turning right
mouse button 1	fire	
mouse button 2	targeting on	targeting off
mouse button 3 (wheel)	targeting switch	
mouse wheel up	next weapon	
mouse wheel down	previous weapon	
u	activate chat	
i	activate chat	
1	weapon 0	
2	weapon 1	
3	weapon 2	
4	weapon 3	
e	new tank	
return	new tank	
k	suicide	
q	reset targeting	
tab	show stats	hide stats
f1	close camera	
f2	normal camera	
f3	far camera	
f4	top camera	
f10	ready	
m	observer forward	observer stop

Console Commands

Sometimes you need more control. Then you have to turn the console on.

Client commands

These are commands that change only thing on the client:

Name	Parameter	Comment
alias	Name, command	Create alias for command.
bind	Key, high_priority, command	Maps some command on key. Key may be one character key or keyname as is in SDL or for mouse buttons use mouse_XX (XX is number of button). Priority has sense only for commands different from [left, right, up, down, fire]. Low priority is for normal in game. High priority is good if you want to define keys for console - those keys will not lose its binding if the console is turned on. The Key has to have a prefix + or – for specifying if you want to bind key down (+) or key up (-)
clear		Clear text console.
connect	Address, port	Connect to the server. Address may be IP or hostname. You may also specify port on server machine. Default port 32101 is used if not specified.
disconnect		Disconnect from server.
exec	filename	Open file and use every line as command and put them to line of commands for processing.
fovx	angle	Change angle of view of camera. Range is 1..179.
fs	on|off	Change between fullscreen and windowed mode. Note works only on some platforms (Windows no, Linux yes)
getvar	variable	Get variable from settings.
help		Print some brief help to console.
mousesensitivity	yaw(x), pich(y)	Mouse sensitivity used if use_mouse_change (see cmd targeting) yaw change isn't linear so it is possible to target precisely and turn faster - but it also require different constant for targeting (don't give large values!). Default is yaw 0.02 and pitch 0.003.
music	on|off	Turn on/off music.
musicvolume	volume	Change volume of music. Range of volume is 0..128.
observerspeed	speed	Set observer speed. You may also use 0 for stop or negative value for going backwards. Good value is something around 2.0.
players		Print some info about all players in game.
quit		Quit the application.
resolution	X*Y	Change resolution of BJS window.
setpreferedname	name	Set preferred name for our player. It is also delivered to the server if connected.

setvar	variable, value	Set setting variable to some value. It doesn't mean that the value is applied!
sound	on|off	Turn on / off sound (samples).
soundvolume	volume	Change volume for sound samples. Range of volume is 0..128.
targeting	floating_yaw	Set behaviour for tracer which may follow turret or whole tank floating_yaw yaw if turret is independent on body of tank - means if tank is turning.
theme	file	Set sound/music theme to file.
unalias		clear all aliases
unbindall		Clear all key bindings. If you call it with closed console you will have problems since it won't appear or ` :).

Server commands

These are commands based on the communication with the server but not addministrative ones.

Name	Parameter	Comment
/changename	name	Change name to player that sent this command.
/chat	message	Send message to all players as chat message.
/nextweapon		Select next available weapon in players tank.
/pause		Change pause state.
/previousweapon		Select previous available weapon in players tank.
/ready		Player notify server that he is ready to play by this command.
/suicide		Kills tank for player who called this.
/weapon	id	Set weapon in players tank to id.
/wannabeadmin	password	Way how user prove that he is an admin.

Server administration commands

You started a server? This will help you greatly!

Name	First parameter	Comment
/addai	count	Add computer player to the game. If count not specified one AI is added.
/fraglimit	limit	Sets the fraglimit for this map. Limit of 0 means to cancel the fraglimit.
/gamespeed	multiplicand	Change speed game by multiplicand.
/kick	playerID	Kick player from server. You may see player's ID using command 'players' on client.
/newmap	map_file	Server will load new map.
/nextmap		End current map and load next map from list.
/quit		Stop server - quit server program.
/restart		Restarts the current map (without loading).
/newmap	map_file	Server will load new map.
/timelimit	limit	Sets the timelimit in minutes for this map. Limit of 0 means to cancel the timelimit

User Configuration File

In configuration files you can set some more settings. The files can be found in your Application Data directory (usually in C:\Documents and Settings\%USERNAME%\Application Data\BJS)[2] as bjs.client.conf and bjs.server.conf.

Client Configuration File

Name	Comment	Type	Default Value
player_name	Preferred player name.	string	Anonymous
player_tank_id	Preferred tank ID.	int	0
resolution	Requested screen resolution, e.g. 640x480.	string	640x480
bpp	Requested bits per pixel (colour depth).	int	16
double_buffering	Double buffering	bool	true
fullscreen	Fullscreen	bool	true
translation_file	Translation file	string	en.xml
enable_sound	Enable any kind of sound/music - if false, music and sound will not be playing even if they are set to true.	bool	true
enable_samples	Enable sound samples.	bool	true
samples_volume	Samples volume - valid values are 0..128.	int	128
enable_music	Enable playing music.	bool	true
music_volume	Music volume - valid values are 0..128.	int	128
sound_theme	Specific sound theme.	string	original.xml
3dsound_enable	Enabling 3D sound using OpenAL.	bool	true
3dsound_device	Name of OpenAL device - empty string means pick the default one.	string	
3dsound_global_gain	Volume for 3dsound - 1.0 max, 0.0 min.	double	1.0
log_in_console	Enable logging in console.	bool	false
fovx	Enable field of view in X coordinate - setting if camera.	double [1-179]	60.0
invert_mouse	Possibility to invert mouse (like up/down invert) in freelook mode.	bool	false
auto_ingame_menu	True means that ingame menu automatically appears when tank drops dead.	bool	true

Server Configuration File

Name	Comment	Type	Default Value
game_speed_multiplicator	Game speed multiplicator - 2.0 means the game is two times faster and 0.5 means that the game is two times slower.	double	1.0
server_password	You need to type this password if you want to become server admin.	string	bjs

2 On Linux search in ~/.bjs/

Credits

Here are people responsible for the game.

Programmers

- Bernard Lidický
  - Basic subsystems
  - Main loop and task management
  - GUI and menu
  - Sound
  - ... and much more
- Martin Maňák
  - 3D Graphics
  - Models
- Peter Libič
  - Object management
  - Simulation
- Lukáš Marek
  - Networking

Artwork

- Bernard Lidický
  - Anaconda, Tiger, bonuses models
  - Sounds
  - Icons
- Martin Maňák
  - Barracuda, bonuses models
- Johannes Sjolund
  - Pink Pantheur and Lion model
- Fiasko music band
  - Music

Special thanks

- RNDr Tomáš Bureš for leading the project at MFF
- Gabriel Karády for game logo

Deserter

- Michal Marek – We hope he is OK