



SimWay Arcade Manual

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Safety first

SimWay Arcade employs low effect (1mW) infrared lasers to track user movement and interaction. Since infrared light is beyond the perceivable spectrum of the human eye, you won't be able to see the typical red dot usually associated with common lasers. However, it's still a laser and therefore you must NEVER point a weapon in someone's eyes. Even low power units can cause eye damage (in a worst case scenario) due to the focusing effect of the lens in the eye. Two different wave lengths are utilized; 780 nm and 850nm. The radiation is rather weak but might damage the eyes if looking straight into the (invisible) beam. A good advice is to handle the replica like it is a real weapon. If you are using an aim module (MonoTracker or DuoTracker) remember to always turn it off when not in use. Finally, be sure to always inform anyone using the system how to handle the system safely prior to use.

When using a real firearm with the simulator, make sure it is unloaded before you start!

How does it work?



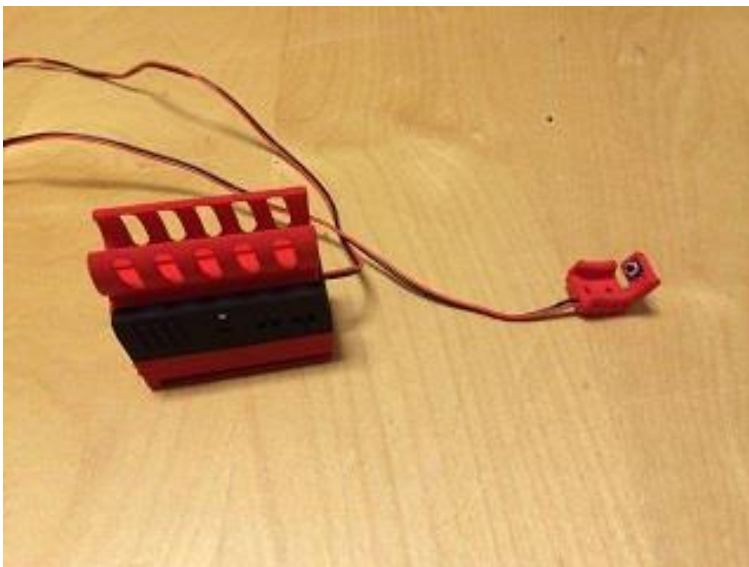
SimWay Arcade is a PC software that comes with a double camera. To use it you need a PC, a projector and a shooting solution. In the picture above you can see an example of a setup with a touch screen attached to the PC, where you control the software. SimWay Arcade offers different shooting solutions, there are replica rifles, replica shotguns, replica handguns, laser ammunition for your own rifle, shotgun or handgun and a DuoTracker that you attach to your own gun.

The different shooting solutions use an IR laser in two different wavelength, 780 nm and 850nm. The laser is invisible to the human eye but the double camera can see them. The two cameras see one IR laser wavelength each. The replica weapons are marked with red and yellow stickers to show which wavelength they are using.

The hardware



The double camera that detects your shooting and aiming.



The DuoTracker is the complete 'clip-on' solution for when you are using your own gun in the game. You attach it to your weapon which then enables you to both use it for shooting within the simulation and to trace the movement of your rifle. It has two built-in lasers, one in each of the wave lengths used by the system. You can also attach it to a replica and use it as an aim module to trace the movement of your weapon.

See installation video here: https://www.youtube.com/watch?v=Q5Ue1gzHE_c

Installation guide

Please see installation movie here: <https://www.youtube.com/watch?v=i8Kq052h-yl>

The Room

You can set up the simulator in many different ways by simply taking the following into consideration:

Make sure there are no outdoor light coming onto the projector screen, since daylight has the same wavelength as the IR laser.

Reduce disturbing light sources. A darker room makes for a better experience.

The camera should be placed at approximately the same distance from the screen as the width of the projector screen. If you have a 4 meter wide screen, place the camera no closer than 4 meters.

Make sure both the projector and the camera have a solid footing. If you move the camera or the projector at any time after set-up you will need to recalibrate the system.

Hardware setup

Attach the camera device to a stable surface and point it towards the screen. Typically, a table or a podium placed in front of the screen (about 3 – 5 meters from the projection surface depending on the width of the screen) works well, both for placing the computer and as a good free space to put the weapon when not in use. Connect the camera device to your computer's USB port (two plugs) and the projector to the graphic card output. Plug in the speakers. If you are using a Touchscreen

this also connects to the graphic card output and clones the projector.

Turn on the computer and projector. Make sure the projected image fills your entire target area. It is advisable not to change the settings or positioning once you have calibrated the system to avoid having to recalibrate the system again

IMPORTANT! The camera tracking device is light sensitive and requires a dimmed environment. Sunlight and strong light sources will interfere with the camera tracking system and must be avoided. Therefore, try keeping the surrounding environment as dark as possible. It doesn't have to be pitch-black but make sure no external light hits the screen or camera device directly.

The system is now ready to be configured.



Installation and basic video configuration

Note: Customers who bought a complete system (including computer) already have the latest software installed and can proceed directly to SOFTWARE CONFIGURATION below.

If you are using your own computer, you first need to install the software. Plug in the USB memory (included in the package) and locate the installer software.

Double click the Setup_Simway Arcade icon and follow the installation instructions.

Install the camera drivers using CamSetup (included in the program package).

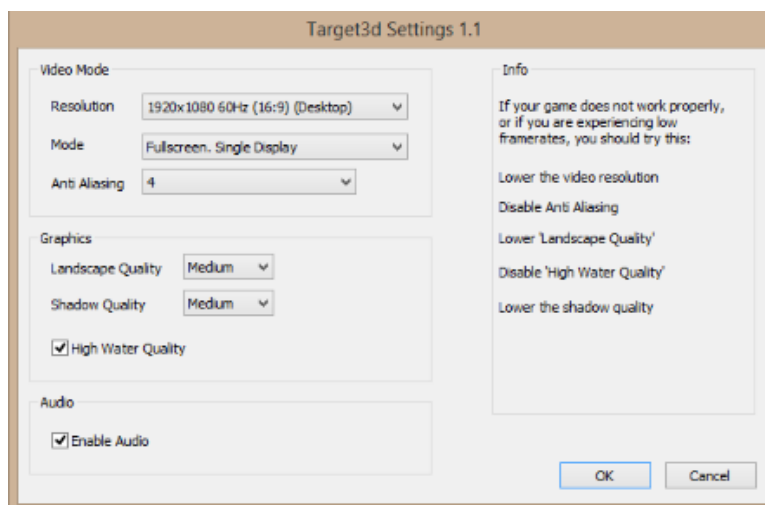
Win7: Startmenu

Win8: On desktop

Run SETTINGS_Target3D.exe to set the pixel resolution. Recommended value is 1920 x 1080, 60Hz (16:9), full screen mode, antialiasing 4, graphics quality: Medium. You can obviously experiment with other values, just be aware that operating at a higher resolution, antialiasing and better graphics quality can cause the graphics to react slower and with a somewhat jerky movement (lower FPS) due to the increased “strain” on the graphics chip.

Win7: Startmenu

Win8: On desktop



Press OK to exit the video Settings

Once you have installed the camera you will have a CL-Eye icon on your desktop. It is a good idea to use this program to see that the camera is running and that the image fully covers your projection area. To adjust this you can alter the angling and direction of the camera on its mount. The focus can also be adjusted by very carefully turning the front lenses of the camera (remember to take the lens caps off).

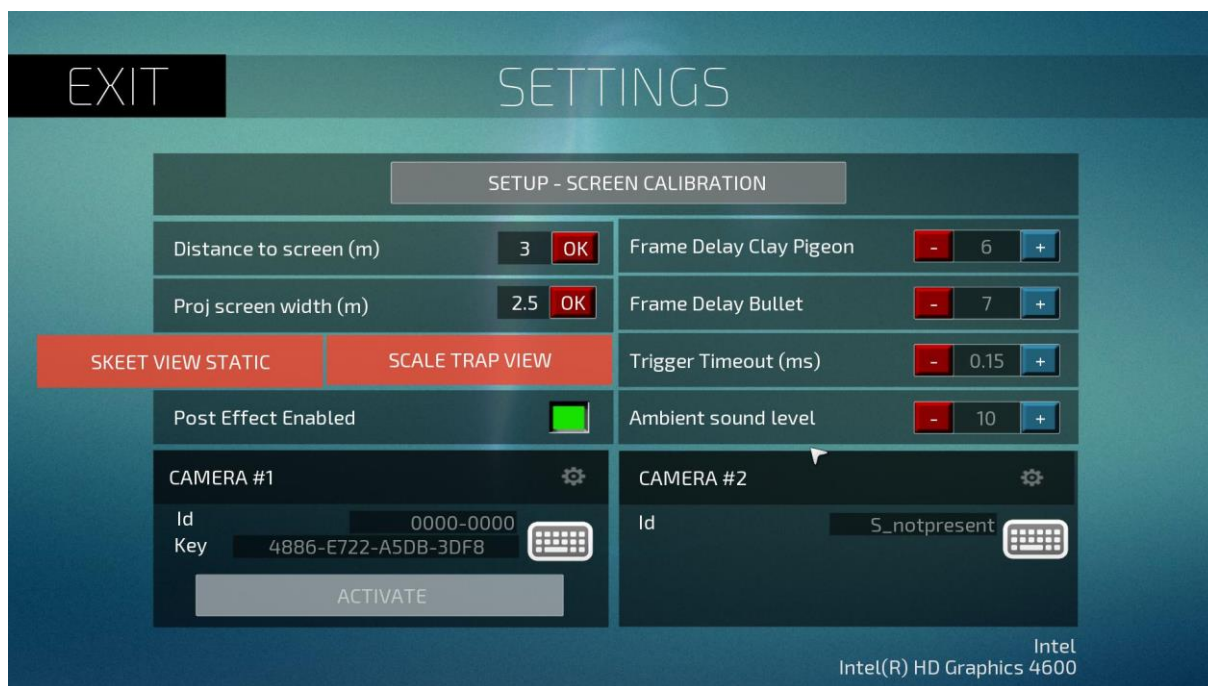
SIMWAY Arcade software configuration

To start SimWay Arcade, simply double click the icon.

Win7: Startmenyn

Win8: On desktop

The first time you start the program you will need to enter a product license code in the SETTINGS MENU. You will find the license code on the back of your camera case. Enter the correct 16 digit key code for one camera that matches the fingerprint Y (8 digits). Hit the Activate button. You only need to activate one camera for both to work. If you have a SimWay Hunt system already, the codes on the camera will only work with SimWay Hunt, please contact your sales person to get the correct SimWay Arcade code. You will need to give her/him your camera fingerprints (8 digits).



In the SETTINGS MENU, insert the corresponding values of your system for DISTANCE TO SCREEN and PROJECTOR SCREEN WIDTH.

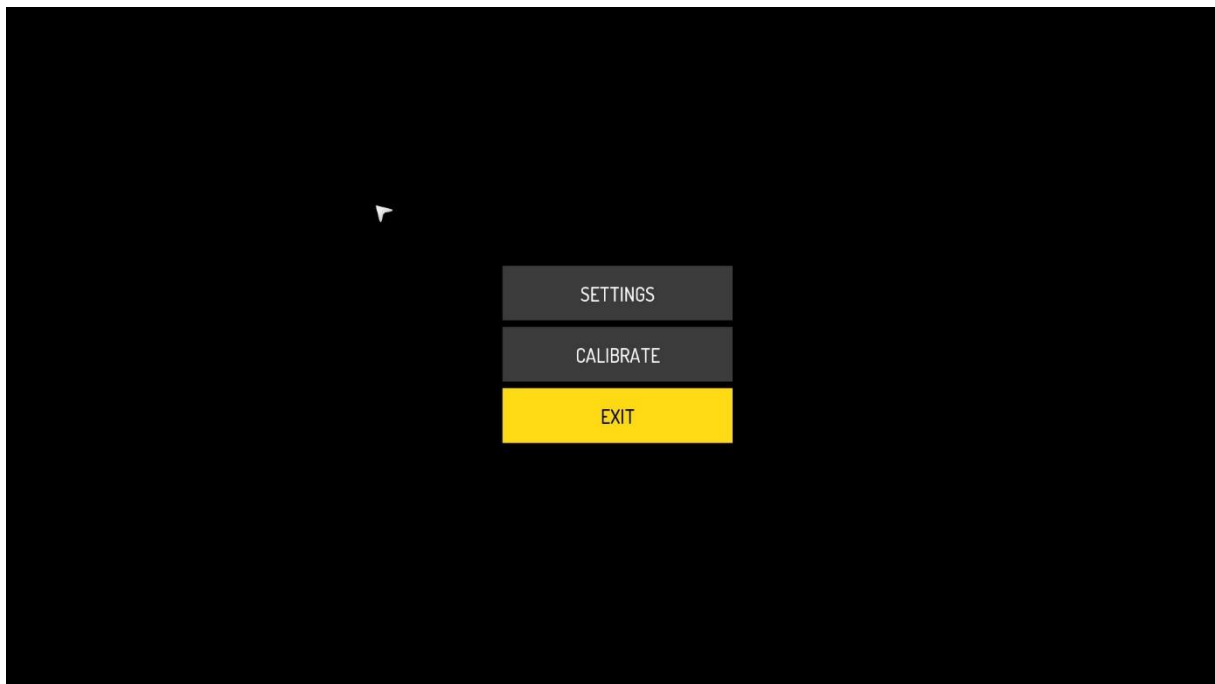
The SKEET VIEW STATIC and SCALE TRAP VIEW buttons are not active for SimWay Arcade.

The FRAME DELAY settings handle the time delay of your system, 7 is the standard value.

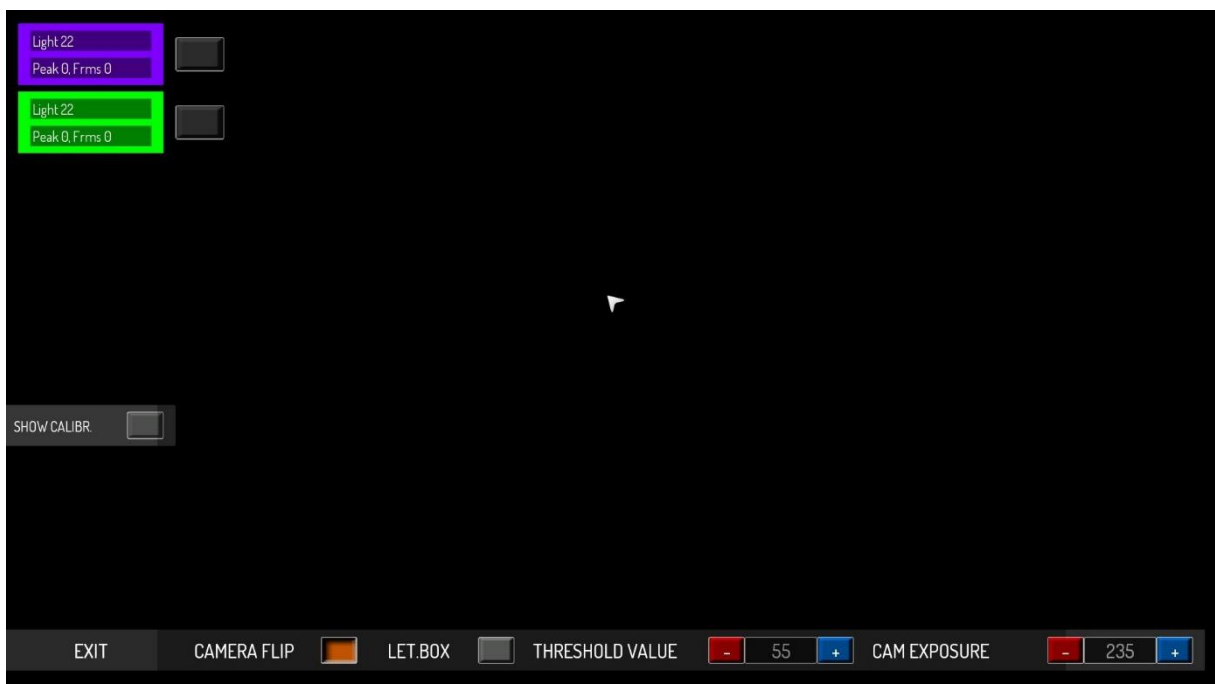
The TRIGGER TIMEOUT is the minimum time limit between two shots. If you set it to low the system will fire double shots.

AMBIENT SOUND LEVEL handles the level of background sound compared to the sound of your shooting.

Still in the SETTINGS MENU, select SETUP – Screen calibration. And then select SETTINGS



At the top left you will see how much light the two cameras detects. Check the “Light” value which should read somewhere between 30 and 70. If it reads more than 70 then check if the camera is only detecting the projector screen.



Make sure no external light is hitting the screen or the camera device. If no apparent light is visible and the value still reads over 70, please contact the reseller for additional support*.

Adjust the THRESHOLD VALUE to be about 20 steps above the Light value.

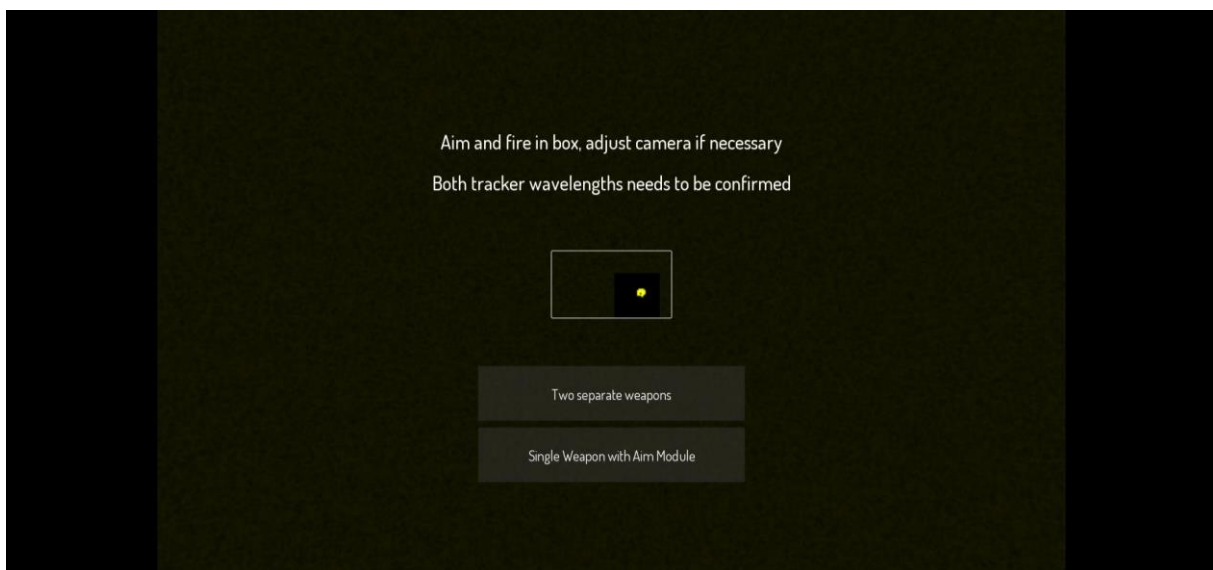
Example: Light value = 55, Threshold value = 75.

Note: If the camera is mounted hanging from the ceiling (or upside down) ensure that the 'Camera flip' box is checked. You can make sure everything is OK by aiming and firing along the screen. If the Green/magenta dot moves in the opposite direction to your shots, then toggle the 'Camera flip' check box.

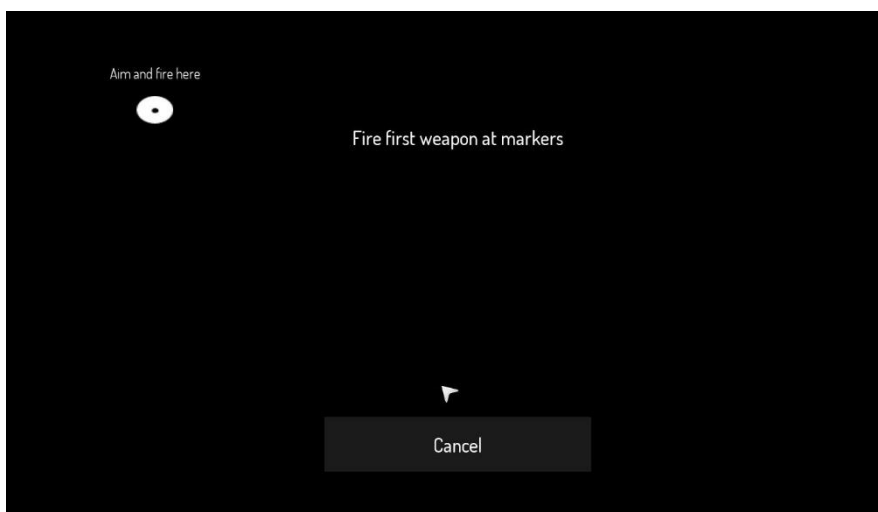
Calibration

To ensure best performance, the simulator must to be thoroughly calibrated. The basic procedure is done just once when you install the system. By defining an "action area" for both rifles, the system is able to track them simultaneously on a shared screen.

Pick one of the rifles; aim and fire at the rectangle to adjust the camera's center position. A blob/dot should appear inside the rectangle, if not, adjust the angle of the camera device until the dot appears in the center of the screen.



Choose if you want to do the calibration with two separate weapons or use a single weapon with an aim module (MonoTracker or DuoTracker) that is turned on.



Follow the screen instructions to define the action area: Aim and shoot at the white circles on the screen until you're prompted to use the second rifle; repeat the procedure one more time.

A small cross should now appear on the screen every time you shoot (approximately where

you are aiming). Note, you will also fine-tune the camera device at a later stage to make sure the virtual bullets hit the screen targets exactly

EXIT the Calibration window and go to main menu to start to play!

FAQ and Troubleshooting

Camera not found?

There is a known issue with the camera device (or in fact any USB device) having trouble to mount when a computer is “cold started”. If you are experiencing this problem simply exit SimWay Arcade, disconnect and then reconnect the camera USB plugs, restart the program again and wait for the main menu to appear*. To prevent this from happening every time you start up the computer you can activate its power saving mode. This mode allows you to leave the machine turned on all the time, consuming just a fraction of power. Look in your computers manual how to do this.

Nothing happens when I fire my weapon?

1. Check the camera

Go to the settings menu and choose screen calibration. Choose settings. Fire at the middle of the screen and look for a green/magenta blob/dot to appear. If nothing's visible, try aiming the camera towards a light source like the sun, a strong lamp or a window. Watch for a somewhat blurry, black and white image on the screen. Refocus the camera lens if necessary and put it back in position, facing the projection screen (you might need to refocus again).

Alternatively, hold a light source in the center of the screen, a lighter will work too. Look for a white blob/dot to appear in the area where you are aiming.

If none of the suggested troubleshooting actions above seem to have any effect, please contact your SimWay Arcade reseller for further instructions.

You should also check the camera focus, you can adjust it in front of the camera by gently turning the lens to make a more visible blob from the gun. Make sure both cameras are in focus.

2. If SimWay Arcade doesn't seem to react when you're shooting at the screen with the dummy weapon, then please follow these steps:

Go to settings menu and choose screen calibration. Choose settings.

Make sure the bolt handle is all the way down and locked into position. Check the weapon again by firing at the screen. Watch for a green/magenta blob/dot.

Try another weapon just to rule out a possible camera or software malfunction. Try firing both rifles at the middle of the screen and look for green/magenta blob/dots, if neither weapon seems to work, please follow the instructions on how to check the camera above. If the other rifle works, check if they are using the same laser wavelength by checking the colors of the SimWay sticker, they come in red and yellow. If the rifles use different laser wavelength it could be a camera problem. Check which camera sees the working rifle by holding a hand in front of one camera lens whilst firing. Then try to adjust the focus of the other camera lens to see if this then picks up the other rifle fire.

Check the batteries. Put the weapon upside down on a table and remove the “ammo cover” by firmly pressing the cover's front piece (see pic.). On some rifles the lid opens easily, on others you might need to apply some force to open it. When the cover is removed you can replace the batteries (AAA). When inserting new ones, make sure they have contact with the battery poles inside the holder. The

batteries fit snugly in the holder and sometimes they can get stuck halfway. Check the weapon again by firing at the screen. Look for a green/magenta blob/dot on the screen.



If still nothing happens, please contact us via phone or email for further assistance.

The system auto-fires when I'm aiming at the screen!

Turn off the aim module (MonoTracker or DuoTracker) or just point the rifle away from the screen. Usually this means you have forgotten to select the tracking module option when you started the game.

You need to make sure that no interfering IR light hitting the screen (sun, halogen, bulbs). Go into Settings/Cam setup/Settings and check that the intensity value at top left corner is set at about 30 (up to 80 is usable). If the value is not about 30 you should increase the threshold value to intensity value plus 20.

Game manual

SimWay Arcade has 6 different ways to play in total 20 games. The games are divided into two themes, sport and wild west.

The main menu has four options, all described below.



Multiplayer games - Team vs Team

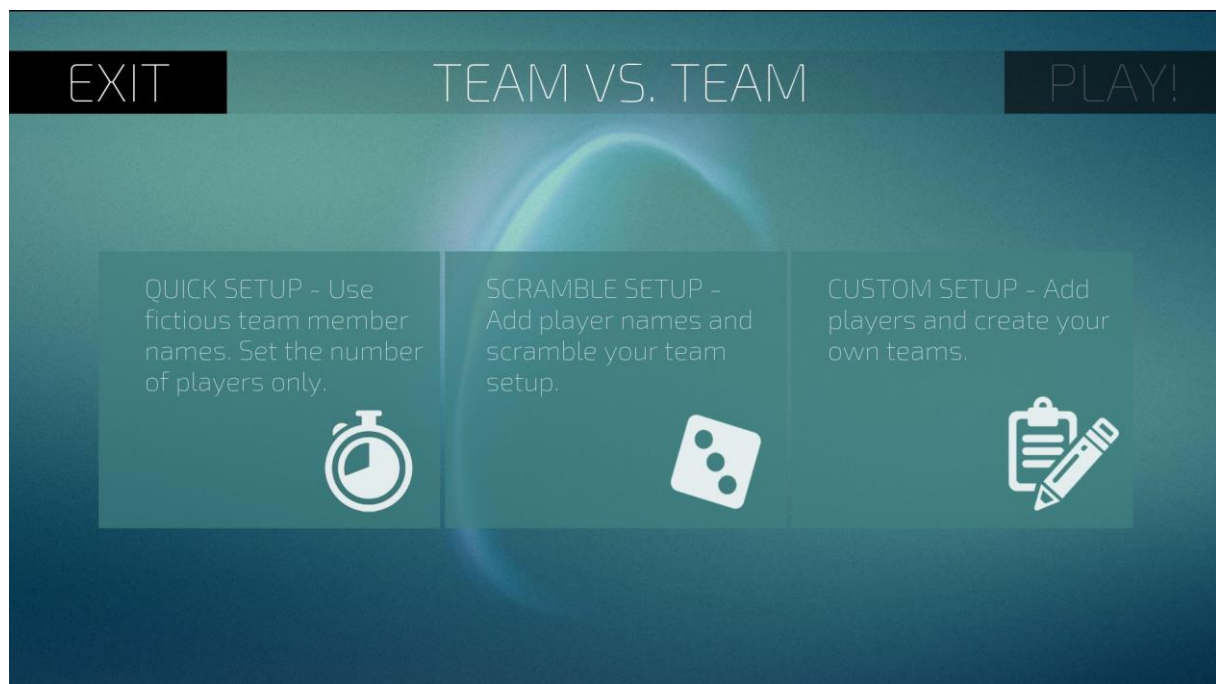
This is a team competition with five events where everyone in the team will play all five events.

When you have chosen Team vs Team the screen will look like the picture below. Now you will choose how you should set up the game, with names and team names. Choose your option and hit PLAY!

Quick setup is the fastest option. You will only set the number of players and you will be given names for both the players and the teams.

Scramble setup lets you put in the names of the participants and the computer will scramble the teams.

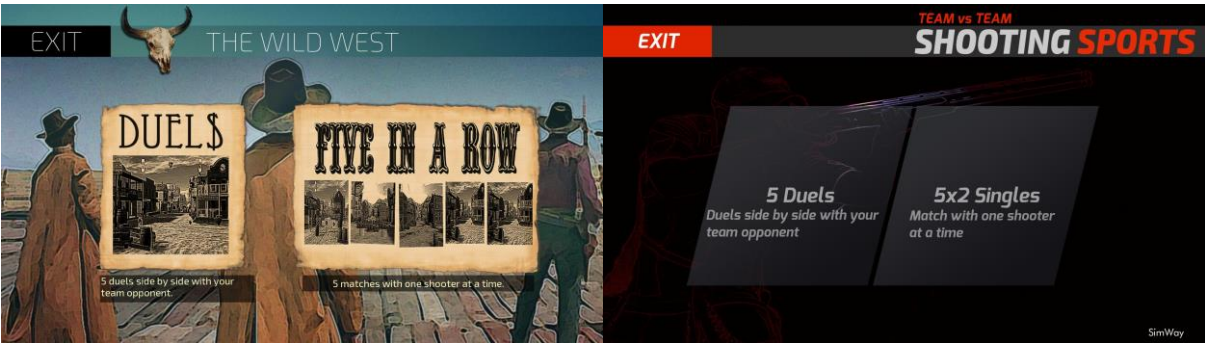
Custom setup give you full control to put in all the participants names in the teams you prefer. You can also put in your team names.



When you have put in the participants you will choose theme to play and if you should compete in single shooter games or in duel shooter games.

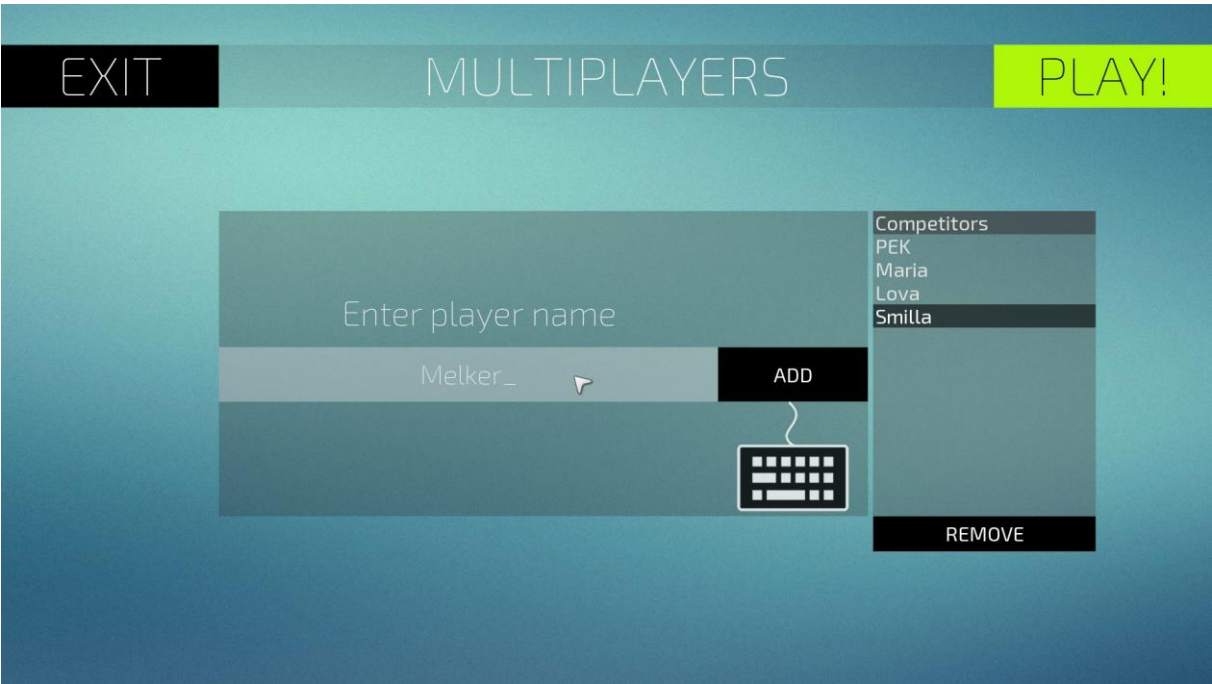
In the duels one player from each team will shoot at the same time, competing to each other. The team that wins the most duels will win the stage.

In the singles, there will also be matches with one shooter from each team, but they will not shoot at the same time, they will instead shoot after the other. The team that wins the most matches wins the stage.



Multiplayer games – Player vs Player

This is an individual competition with five events. At first you will type the names and then choose the theme you want to play. All players will compete in five different events and there will be a resultlist after each event.



Quick games – Duel players

Choose your favourite duel event and play it over and over again with your friend! You will find all ten events from the Team vs Team setup.

Quick games – Singel player

Choose your favourite singel event and play it over and over again. You will find all ten events from the Player vs Player setup.