

PANZERDUELL

MANUAL

Controls and how to play – made simple

The real-time tank battle for 2–4 players

01 Quick start
02 Goal of the game
03 Keyboard
04 Mouse
05 Using the menus
06 Controller
07 Touch – iPhone and iPad
08 Weapons and equipment
09 Settings
10 Playing online
11 Tips
12 Help

© 2026 Urs Humm. All rights reserved.

Version 3.0

01 QUICK START

Your first game in three steps – no settings needed.

1
Start

Open the game and tap **PLAY**.

2
Choose

Quick game › **Against computer** – or **Two players, one device**. Default: first to 3 wins (**Match rule**). Tap «Computer: Normal» to change the strength (Easy › Normal › Hard).

3
Fire

Aim the barrel with Q / E, set the power with W / S, press Space. The arrow shows direction and strength.

> New to the game? **More** › **Tutorial** teaches you everything in about two minutes.

02 GOAL OF THE GAME

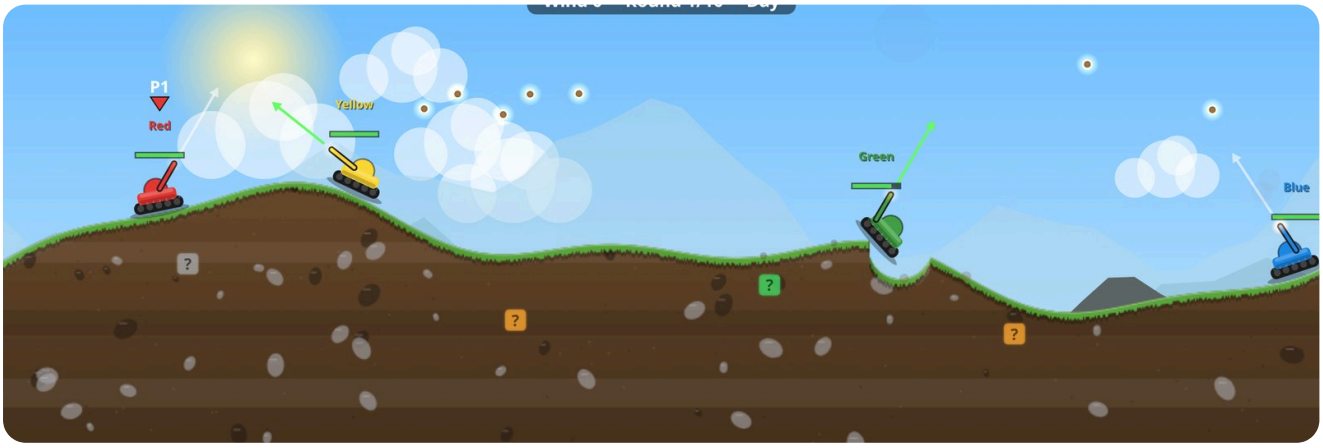
Everyone shoots at the same time – in real time, nobody waits for their turn. The last tank (or team) standing wins the round. Hits, kills and survival earn points and money.

Aim
Set angle and power. The arrow shows direction and strength; the wind has its say too.

Fire
Everyone shoots at the same time. Every weapon has a reload time – timing is everything.

Dodge
Drive, hop, fly with the jetpack or raise your shield.

Upgrade
After every round you earn points and money – off to the weapon shop.



© 2026 Urs Humm. All rights reserved.

03 KEYBOARD

Up to four players can share one keyboard. Player 4 uses the numeric keypad.

Action	Player 1	Player 2	Player 3	Player 4
Drive left	A	←	J	Num 4
Drive right	D	→	L	Num 6
Barrel up	Q	,	U	Num 7
Barrel down	E	.	O	Num 9
Power +	W	↑	I	Num 8
Power –	S	↓	K	Num 5
Fire	Space	Enter	H	Num 0
Previous weapon	Y	ö	N	Num 1
Next weapon	X	ä	M	Num 3
Hop	F	ü	R	Num ,
Jetpack (hold)	C	-	T	Num *
Shield (hold)	V	⇧ right	Z	Num –
Targeting computer	B	$	G	Num +

Swiss keyboard (QWERTZ)

The table shows the labels of a Swiss keyboard. On QWERTY keyboards (US, UK) **Y and Z are swapped**, and ; ' [/ \ take the place of ö ä ü - $. The game detects the layout itself and always shows the right keys.

Change any key

Settings › **Controls** › **Assign keys …**: tap an action, press the new key. Esc cancels, “Reset all” restores everything.

© 2026 Urs Humm. All rights reserved.

04 MOUSE

On PC and Mac keyboard + mouse is the default (player 1). Switch: **Settings** › **Controls** › **Input** (keyboard + mouse / keyboard only / Xbox / PS5). Mouse: right button short = hop, hold = weapon wheel, middle = jet (hold), wheel = switch weapon – all changeable under **Map mouse**. Music: ♪ in the game or the **0** key; the pause menu (Esc/P) has **Settings**.

Aim	Move the mouse – the barrel follows the pointer.
Change weapon	Turn the mouse wheel.
Drive	A / D or ← →

Power and fire – two ways

DEFAULT

Power: Hold button

Hold the left button: power rises from 10 to 100 in just under 1 s, stays there for a moment and then goes back. **Release = fire.** If the mouse leaves the window, the shot is cancelled.

ALTERNATIVE

Power: Mouse distance

The further the pointer is from your tank, the more power. **Click = fire.**

Switch: **Settings** › **Controls** › tap “Power: Hold button”. If you chose “Power: Mouse distance” yourself, it is kept.

05 USING THE MENUS

↑ ↓ ← →	Move through the menu
Enter or Space	Select
Esc	Back · in a game: pause
P	Pause
F11	Full screen (Mac and Windows app)

Mouse and touch: just tap. Buttons with ◀ ▶ (for example “Computer: Normal”): a click or tap in the middle moves to the next value, ◀ goes back. Controller: D-pad moves, A / ✕ selects, B / ○ goes back.

© 2026 Urs Humm. All rights reserved.

06 CONTROLLER

Xbox and PS5 controllers (DualShock 4 too) are detected automatically – just press a button. Up to four controllers at once, with vibration on hits.

Action	Xbox	PlayStation
Drive	Left stick ← → – the further, the faster	
Barrel	Right stick: direction = barrel · fine: D-pad ↑ ↓ (±1°)	
Power	D-pad ← → (±1, hold to repeat) · or charge, see below	
Charge, release = shot (hold)	RT	R2
Cancel charge	LT	L2
Fire (instant)	A	✕
Previous weapon	LB	L1
Next weapon	RB	R1
Weapon wheel (hold)	View	Create/Touchpad
Hop	B	○
Shield (hold)	X	□
Jetpack (hold)	Y	△
Targeting computer	R3	R3
Pause	Menu	Options

> Every action can be moved to another button: **Settings** › **Controls** › **Map controller …** (duplicate buttons are swapped, «Restore defaults» resets). Pairing via Bluetooth: in the game under **More** › **Help & controls** › **Connect**.

In the main menu

🏆 Leaderboard

In the main menu: every profile on this device, ranked by wins – with losses, games, points and best score. The computer and online opponents get their own entries. Everything stays on your device. New achievements pop up right away in the game as a short banner. Next to it, the round buttons ⚙ Settings, 👤 Profile and ••• More.

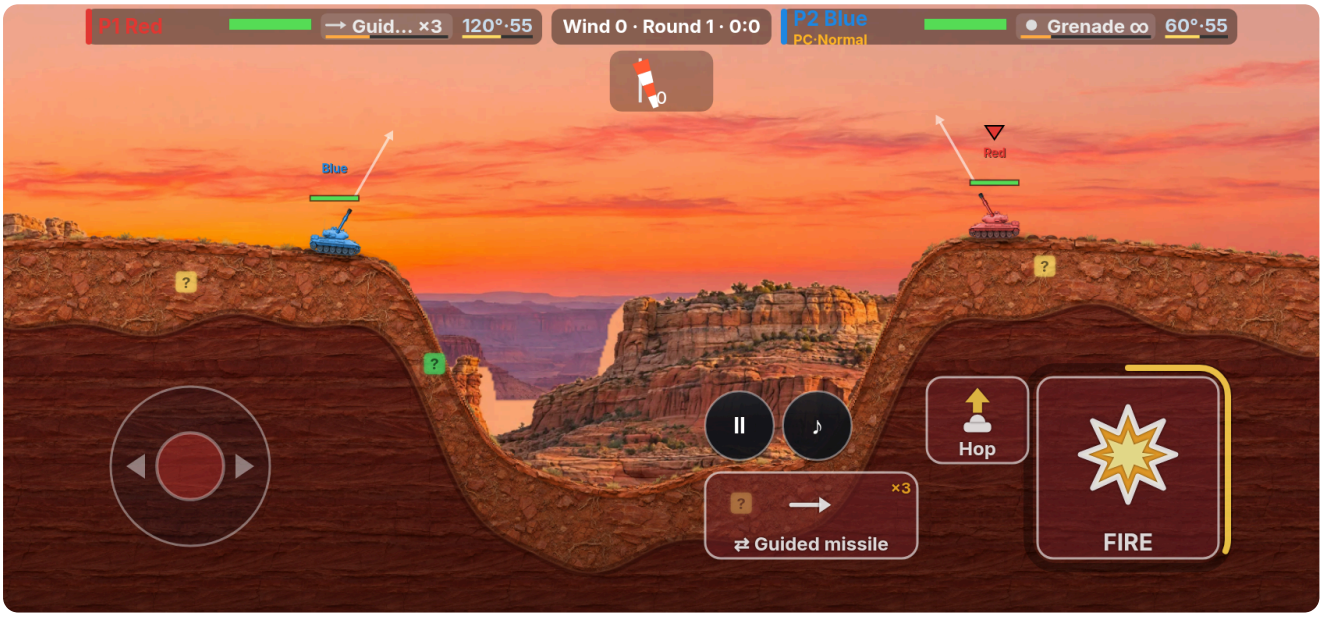
← UPH Home

In the main menu (on phones as a clearly visible pill above PLAY) and in the pause menu ("← UPH Home"): back to the UPH website in the browser. In the iPhone, iPad, Mac and Windows app the item is called **"View website"**: the website opens inside the app, **"← Back to the game"** at the top takes you back – the game never continues in Safari.

© 2026 Urs Humm. All rights reserved.

07 TOUCH - IPHONE AND IPAD

On iPhone and iPad there are three touch controls (Settings › Controls › «Touch controls»): **Free drag** (default, next page), **FIRE button** and **Classic**. In all of them you drive with your **left thumb** – the joystick appears where you touch down. Here you see all buttons with all extras; in the game shield, jet and targeting computer only appear when you have them, while FIRE, weapon and hop stay fixed in place. With «FIRE button» you hold FIRE to charge the power and release to shoot, «Classic» has its own buttons for barrel and power. Since 2.6.1, half the drag distance gives full power; for fine values tap and hold at the tank (fine adjustment). **Targeting computer** (shop, $100): on automatically after buying – while aiming you see the whole flight path from the barrel to the impact (with wind and terrain) plus an impact marker, until the end of the next round and only you (never the computer opponent). Off/on with the crosshair button, key B or R3.



Left Right — Drive

Barrel Barrel — Barrel ↺ ↻

Power + Power – — Power + –

FIRE — Fire

⇄ Grenade — next weapon – shows the current one (only weapons you own)

Target comp. — Targeting computer

Jet — Jetpack (hold)

Shield — Shield (hold)

Hop — Hop

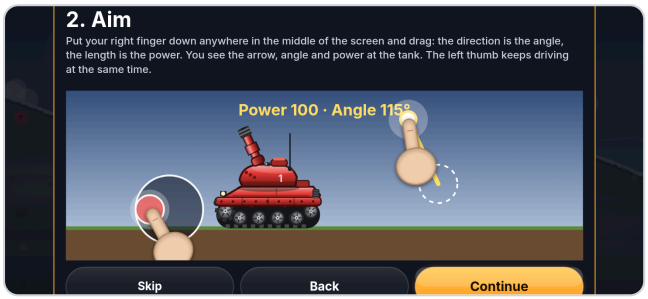
> In the browser: «Share › Add to Home Screen» – then Panzerduell starts like an app, full screen.

© 2026 Urs Humm. All rights reserved.

07 TOUCH - IPHONE AND IPAD

Touch: Free drag (default)

Aiming works like a slingshot: put your right finger down **anywhere in the middle of the screen** and drag. The direction is the angle, the length is the power – you see the arrow and values right at the tank. Releasing fires.



Drag = aim: angle and power are shown at the top, the left thumb drives at the same time.



Guided missile: drag in the direction you want it to fly – in any direction.

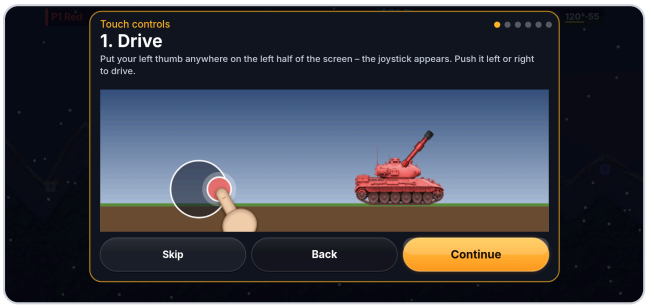
- **Cancel:** move your finger back to where you touched down and release it there – no shot is fired.
- **FIRE and buttons bottom right:** FIRE is always there. One tap fires again, without dragging, with exactly the last angle and power you set – ideal when the shot is right (MG: hold = continuous fire). The ring around FIRE fills until the weapon is ready again. Fixed next to it: weapon (tap = next, hold = weapon wheel) and hop. Shield, jet and targeting computer only appear when you have them and line up next to them without gaps.
- **Tutorial:** Settings › Controls › «Watch touch tutorial» shows everything step by step with finger pictures.
- **Machine gun:** as long as you drag, it fires continuously in the dragged direction.
- **Zoom and overview:** two fingers = zoom, double tap = to your own tank.
- **Shop (iPhone in portrait):** tap selects, a quick double tap buys. In landscape, on iPad and on Mac there is the Buy button.

© 2026 Urs Humm. All rights reserved.

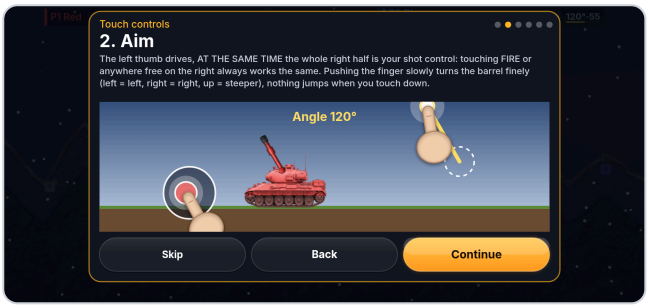
07 TOUCH - IPHONE AND IPAD

Touch tutorial

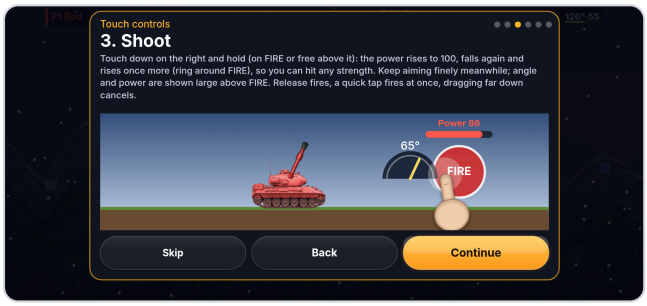
The first time you start a game on an iPhone or iPad, an **animated hand** shows in five short steps how “Simple” works. You can **skip** it at any time (button or Esc), it appears only **once**, and you can open it again under **Settings › Controls › Watch touch tutorial**.



1. Drive: put your left thumb down, the joystick appears.



2. Aim: drive left, at the same time drag freely on the right – direction = angle, length = power.

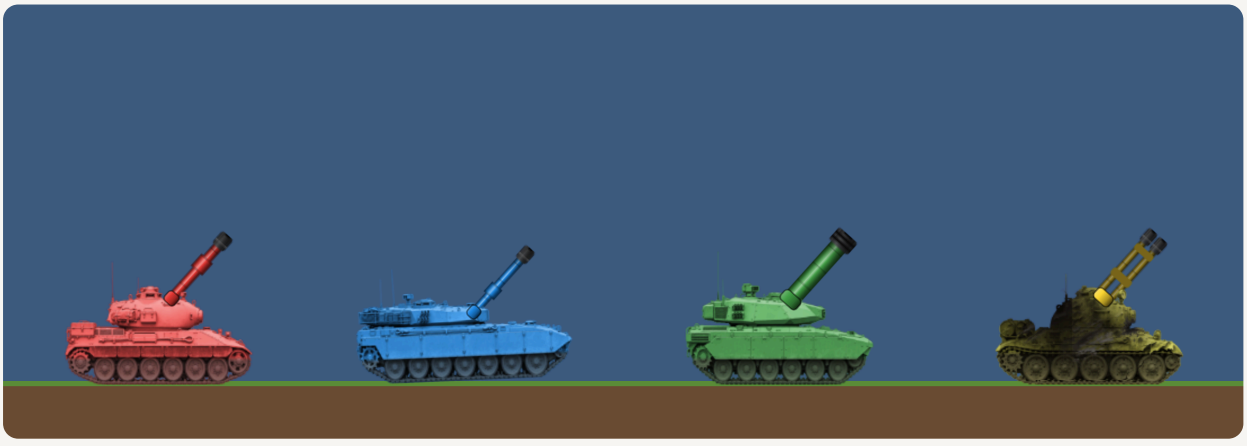


3. Shoot: FIRE (holding charges the power when “Power by holding” is on).



5. More: cancel, zoom, double-tap, one hand, buttons left, weapon bar.

New tank look



Every tank has detailed tracks with road wheels, a turret with hatch and antenna, paint shading in your player colour, visible barrel recoil and damage that grows as energy drops. Everything is drawn in the game.

© 2026 Urs Humm. All rights reserved.

07 TOUCH - IPHONE AND IPAD

Weapons, extras and magnifier

You change weapons right with your thumb, and the loupe helps you aim precisely.







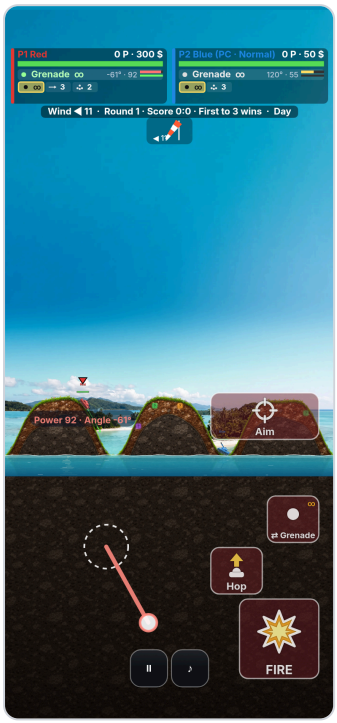
- **Weapon wheel:** hold the “Weapon” button (or the weapon display at the top), drag your finger to the weapon you want and let go. **Tap** = next weapon, **swipe** right/left = next/previous.
- **Magnifier:** with the option **«Magnifier: show impact point»** (Settings › Controls, off by default) a circle below the top display shows, magnified, where your shot will probably land while you aim with your finger – with a crosshair and the terrain around it (without wind; with «Trajectory preview» including wind). **Tap and hold** on the tank switches on **fine adjustment**: the same finger movement changes power and angle only about half as much.
- **Extras:** jet, shield and – only if bought – the “Targeting computer” unfold under the “Extras” button; hop is always visible, fixed next to FIRE (“Simple” mode only); the menu closes by itself after 5 seconds of rest.
- **Remembered:** angle and power are remembered per weapon – when you switch back they are as you left them (the machine gun keeps its fixed power).

© 2026 Urs Humm. All rights reserved.

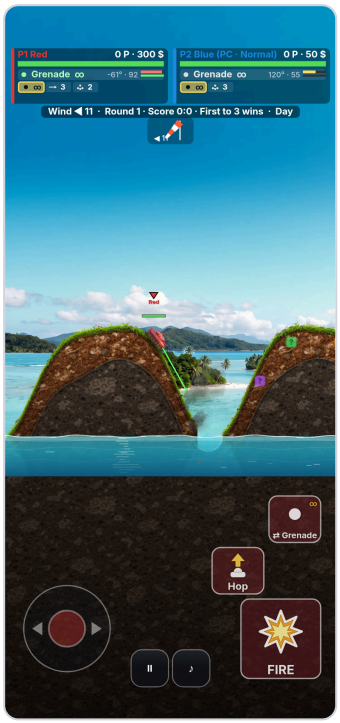
07 TOUCH - IPHONE AND IPAD

One hand, left-handed and zoom

In portrait you can play one-handed, mirror the layout for left-handers and zoom in.



One-hand mode: aim pad from where you touch



Zoom: double-tap jumps to your own tank



Two thumbs: drive left, aim right



Buttons left: FIRE and extras left, driving and aiming right

- **Two thumbs (“Simple” mode):** the left thumb drives with the joystick while **at the same time** the right one points the direction anywhere free on the right half of the field (outside the buttons): drag where the barrel should aim, with a live readout at the tank. When you let go the angle stays, you fire with **FIRE**; drag back to the start point = cancel. The area right above FIRE only aims and never fires. Dragging from the tank, fine adjustment and the magnifier are still there. For left-handers the sides are mirrored.
- **One-hand mode** (Settings › Controls, portrait with “Simple” only): the lower half of the screen belongs to your thumb. The **“Drive / Aim”** button switches: “Drive” shows the joystick where you touch down; “Aim” = drag from the touch point in the shot direction, release = fire, back to the start point = cancel (with “Aiming: slingshot” pull back). Dragging from the tank still works.

© 2026 Urs Humm. All rights reserved.

07 TOUCH - IPHONE AND IPAD

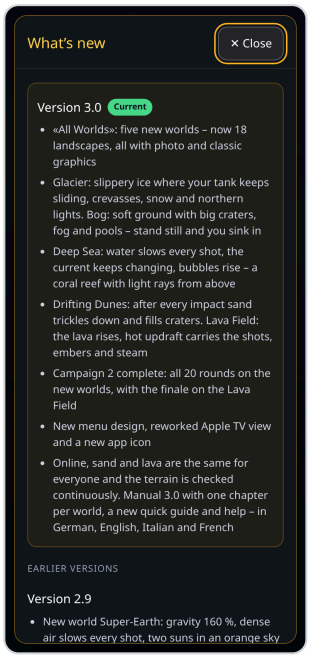
One hand, left-handed and zoom



Power by holding: charge ring around FIRE, briefly “Power 100 · let go!” at 100



Weapon bar: only the weapons you have



Tap the version number: what’s new

- **Power by holding** (Settings › Controls, off by default)**: hold FIRE** to charge power – a **charge ring** runs around the button, from 0 to 100 in 2 seconds (3 seconds with “Charge speed: slow”). At 100 the power pauses briefly (“Power 100 · let go!”), then drops again. **When you let go**, the shot fires with that power; on the right you then only drag the angle. With the MG the power stays fixed.
- **Buttons left** (Settings › Controls › «Layout», default right): FIRE, weapon, hop and extras on the left, driving and aiming on the right – in all touch controls, portrait and landscape. Magnifier and power/angle move aside.
- **Edge protection:** the buttons keep clear of the iOS edge gestures (swipe back, home bar); touches in the outermost strip start no control, and a cancelled touch never fires a shot.
- **Weapon bar** (Settings › Show weapon bar, off by default)**:** at the right edge (left for left-handers) above the buttons, a narrow strip shows **only the weapons you have** (icon and ammo). A tap selects the weapon directly, the active one has an orange outline; when ammo runs out or you buy a weapon the strip updates at once. With many weapons you swipe up and down in the strip. Weapon wheel and swiping on “Weapon” remain.
- **Zoom:** spreading two fingers enlarges the field (up to 2.6×), pinching shrinks it, and two fingers move the view. **Double-tap** jumps to your own tank: first zoom in, then centre, finally back to 1×.
- **What’s new by tap:** a tap (or click) on the **version number** in the main menu opens «New in version …» – the current version at the top, earlier ones below, in the game’s language.

© 2026 Urs Humm. All rights reserved.

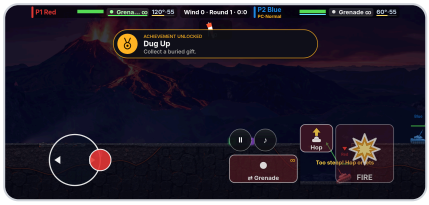
★ GAME WORLD

Terrain, gravity and wind

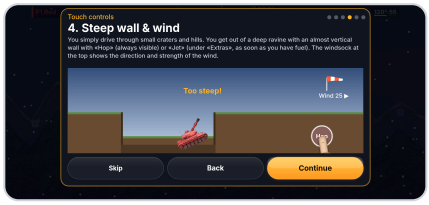
Your tank tilts **exactly with the terrain**, gravity feels real, and wind and weather are visible right on the battlefield.



Windsock at the top centre: direction and strength (0 to 40). Wind streaks, clouds, rain and snow drift along.



Near-vertical wall: the tank tips backwards and slides back – the only way out is a hop or the jets.



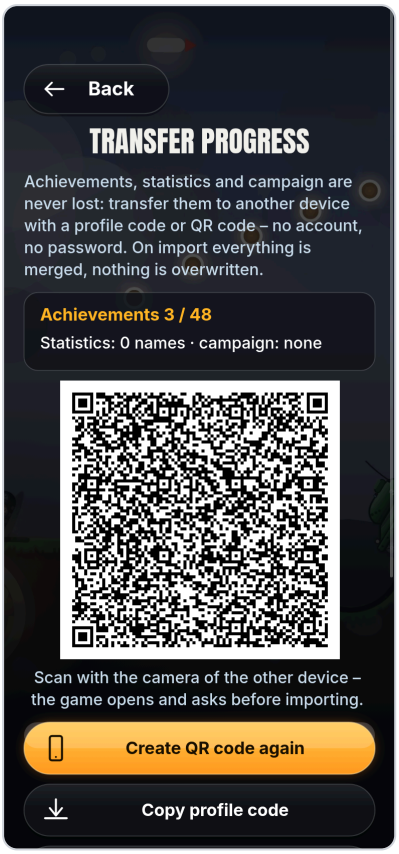
Touch tutorial, step 4: steep wall and wind.

- **Drivable:** you simply drive through small craters, hills and slopes up to about 60°; the tank always sits flat on the ground.
- **Gravity:** on slopes that are too steep the tank slides down or tips backwards – but it always rights itself, never upside down. Deep falls cause fall damage.
- **Wind display:** can be turned off under Settings › Graphics › “Wind display on the field”. Wind deflects shells and bombs, not the MG or laser.
- **Steep wall:** only a deep ravine with a near-vertical wall (from about 70°) stops you. Up to about 55 pixels a **hop** helps, higher only the **jets** (jetpack).
- **Computer:** opponents recognise steep walls too and hop, fly or turn around.

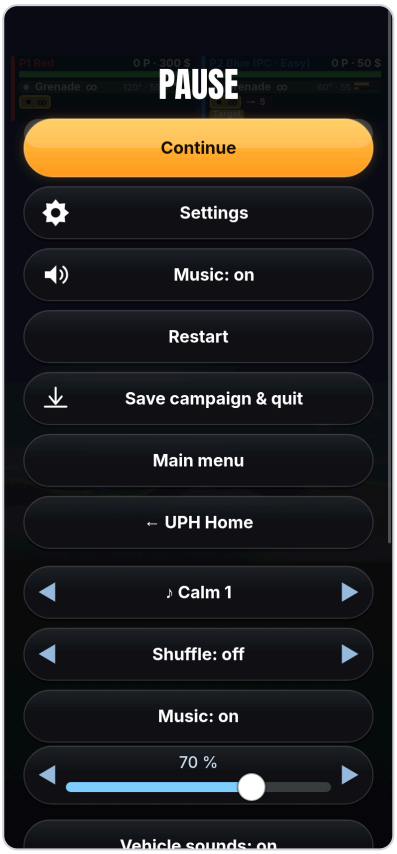
© 2026 Urs Humm. All rights reserved.

★ GAME WORLD

Progress, campaign and sound



Profile › Transfer progress: scan the QR code with the other device.



Pause › “Save campaign & quit”.

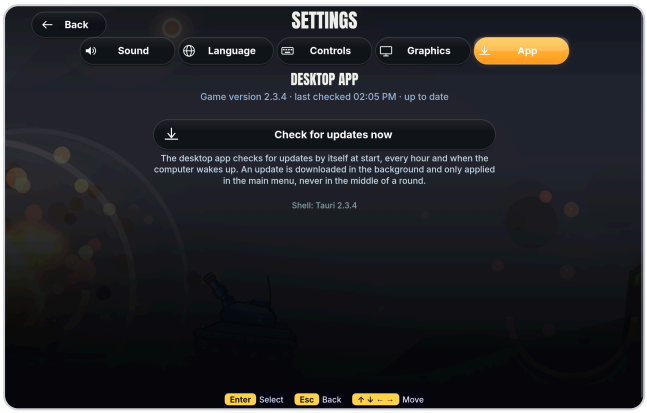
- **Transfer progress:** Profile › Transfer progress shows a QR code and a profile code. Scan it on the other device or paste it under “Enter profile code …”. Achievements, statistics and campaign are **merged** – nothing is lost, no account needed.
- **Campaign:** it is saved at the start and after every round. Pause › “Save campaign & quit” lets you stop at any time; “Continue” shows the round and date.
- **Sound and HUD:** stronger explosions with deep bass, punchier shots and a fuller sound on iPhone; the display at the top is slightly larger and stays compact.
- **iCloud and Game Center:** in the app for Apple devices, progress syncs via iCloud and achievements and best scores appear in Game Center. In the browser and on Windows, use the profile code.
- **Achievements:** three new ones – Summit stormer (escape a steep wall), Storm-proof (win a round in a thunderstorm) and Wind whisperer (a hit in strong wind from over 400 pixels).

© 2026 Urs Humm. All rights reserved.

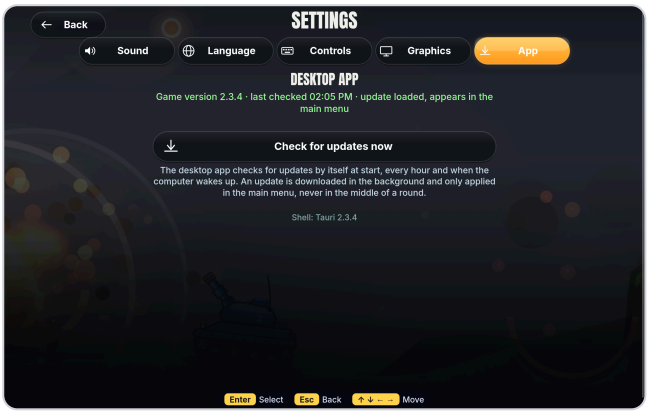
★ DESKTOP APP

The new desktop app

The Windows app runs on **Tauri**: it uses the web view built into the system, so the download is **small**, it starts quickly and needs little memory. The game itself is exactly the same as in the browser.



Settings › App: game version, last check and “Check for updates now”.



Update loaded: it is applied in the main menu, never in the middle of a round.

- **Updates:** the app checks for a new version by itself at start, every hour and when the computer wakes up. Only changed files are downloaded, and each one is verified.
- **Progress is kept:** on first start the new app takes over profile, friend code, achievements and settings from the previous desktop app. The installer replaces the old version in the same place.
- **In the browser and on iPhone** there is no “App” tab: there the game updates itself the next time you open it.
- **By hand:** Settings › App › “Check for updates now” checks right away. The line above shows the game version, the time of the last check and the result.
- **Windows:** the app needs the Microsoft WebView2 runtime, which is already part of Windows 10 and 11; if it is missing, the setup installs it. SmartScreen notice as before: “More info” › “Run anyway”.

© 2026 Urs Humm. All rights reserved.

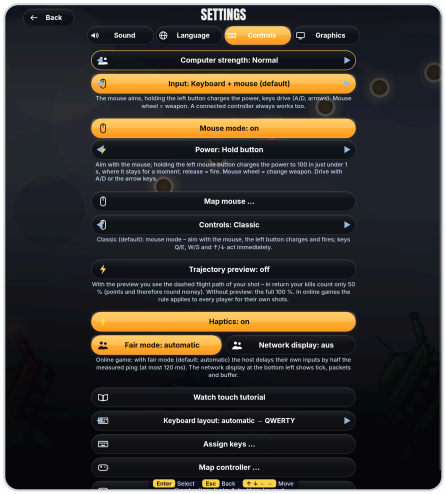
★ ONLINE PLAY AND CONTROLS

Steadier online play

Online, updates and inputs arrive quickly and evenly, lost packets don’t slow anything down, and as a guest your aim stays exactly as you set it.



Guest view with the network display (bottom left) and the slow-connection notice.



Settings › Controls: “Network display” and, in mouse mode, “Power: Hold button” as the default.

- **Fast data channel:** positions and inputs travel over a separate fast channel; old packets are dropped instead of resent. Hits, rounds and the shop stay on the safe channel. Only what changes is sent.
- **Aiming as a guest:** your tank responds instantly to driving, aiming and firing; angle and power go to the host as fixed values, the barrel doesn’t jitter.
- **Same version:** the fast channel and prediction are used when host and guest have the current version. With an older version the game still works, just without these benefits.
- **Fixed tick:** the host calculates at a fixed 60 steps per second, regardless of its device’s frame rate, and sends 30 updates per second.
- **Warning and network display:** if the connection runs over a detour (relay) or the ping is above 150 ms, a notice appears. The network display (Settings › Controls) shows tick, packets, gaps and data volume.

© 2026 Urs Humm. All rights reserved.

★ ONLINE PLAY AND CONTROLS

Controls: mouse, joystick, queued shot

With the mouse you charge power by holding the button by default – with a short pause at 100; the shot fires when you let go. On touch screens the joystick follows your thumb quickly.



Mouse mode: hold the left button – after just under 1 s the power rests at 100 for a moment.



Released too early: “Shot queued” – it fires as soon as reloading is done.

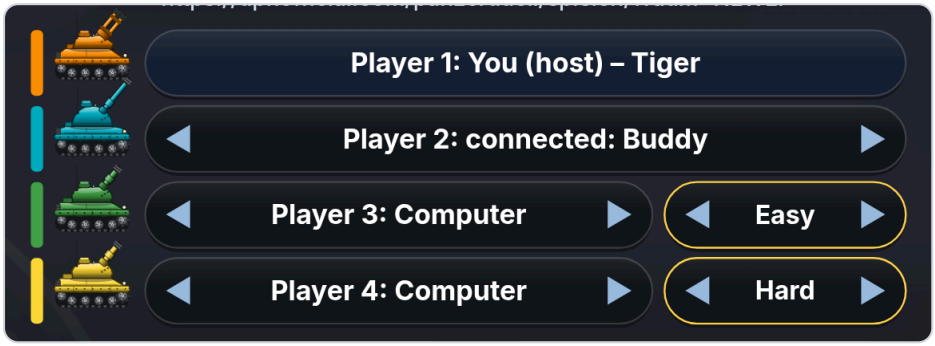
- **Mouse: hold is the default.** In mouse mode power rises to 100 in just under 1 s, stays there for 0.4 s, then goes back; **release = fire**. If you prefer aiming by distance, choose “Power: Mouse distance” – that choice is kept.
- **Joystick:** it now follows your thumb about twice as fast and still stays calm – short corrections are easier.
- **Computer strength in Quick game:** a simple click or tap on «Computer: ...» steps Easy › Normal › Hard › Easy; the button has a yellow outline. ◀ goes back.
- **Shot queued:** if you release the slingshot while still reloading, the game remembers the shot and fires it with exactly those values as soon as it can. A ring at the tank shows the wait.
- **iPhone Duo:** outer and inner screen, portrait and landscape, are recognised; when you fold or unfold, the buttons rearrange at once without driving, charging or a queued shot getting stuck. Half folded, buttons and notices stay next to the crease.

© 2026 Urs Humm. All rights reserved.

★ ONLINE PLAY

Online: instant, fair and with your own tank

As a guest you now play almost as if on your own device, the host can give up his advantage, and in the room everyone drives their own tank.



Online room: own tanks for host and guest, strength per computer.



Settings › Controls: fair mode, haptics, charge speed.

- **Guest prediction:** as a guest your tank drives, aims and fires instantly without waiting for the host. The host checks everything and smooths out small differences invisibly.
- **Fair mode** (host only, off by default): your own inputs are delayed by half the ping, at most 100 ms – so the host has no advantage.
- **Strength per computer:** in the room each computer slot has its own Easy › Normal › Hard button (yellow outline). Without your own choice, the Quick game strength applies.
- **Manual and website:** all chapters reviewed, new pictures from the current game, new background video.
- **Buffer:** other tanks are shown with a short buffer and move smoothly, even when single packets are lost.
- **Your tank in the room:** host and guests drive the tank they designed under “Customise tank” – colour, body, barrel and name, in the room and in the game. If two people pick the same colour, both keep it; only computers switch.
- **Touch:** charge ring around FIRE with “Power by holding”, a short pause at 100 and “slow” charge speed (3 s). On iPhone the haptics can now be felt.

© 2026 Urs Humm. All rights reserved.

★ CONTROLLERS AND TOUCH

One press, one shot – and the controller your way

On the phone one thumb is now enough to charge, aim and fire. Controllers have a new, more sensible layout and can be remapped freely.



Hold FIRE and drag up-left: power and angle with one thumb.



iPhone landscape: fog evenly across the whole screen.



Settings › Controls › Map controller (PS5).



Hold R2: charge ring above the tank, L2 cancels.

- **One-press fire** (touch, Simple mode, on by default): tap FIRE to shoot at once with the set power. Hold to charge with the charge ring; dragging with the same thumb sets the angle (direction from the button). Release fires, dragging back onto the button cancels.
- **New controller layout:** left stick drives, right stick aims, hold R2/RT to charge and fire on release (L2/LT cancels), ✕/A fires at once, L1/R1 switch weapons, ○/B hop, □/X shield, △/Y jetpack, R3 targeting computer.
- **Map controller:** tap or select an action, then press the button you want on the controller. All help pictures and hints then show your own mapping with the matching PS or Xbox symbols.
- **Mouse:** while charging with the button held, moving back onto your own tank cancels the shot.
- **Fine control:** D-pad ↑ ↓ changes the angle by 1°, ← → the power by 1 (hold to repeat). **Weapon wheel:** hold touchpad/Create or View, choose with the right stick, release.
- **iPhone landscape:** fog, rain, snow and lightning lie evenly over the whole screen, including the edges next to the camera; the fog is a little clearer, and the terrain continues naturally at the edges.

© 2026 Urs Humm. All rights reserved.

★ AIMING AND STEERING

Aim finely, steer freely

On the phone you now turn the barrel as finely as you like – right with the FIRE finger. You steer the guided missile with your right thumb while the left one keeps driving.



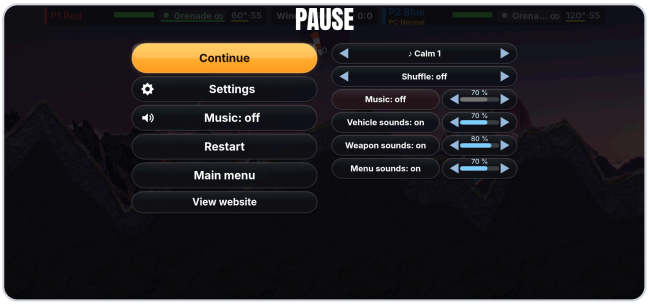
Hold FIRE and push slowly: the barrel turns finely, angle and power large above the button.



Guided missile: right thumb ◀ ▶ steers, the left joystick drives. Hint and fuel at the top.



Hop is visible in every mode and size.



App: “View website” in the menu, back with “← Back to the game”.

- **Fine aiming with FIRE:** touch and hold to charge power, the same finger turns the barrel **relatively**: push a little left = left, right = right, up = steeper. Nothing jumps when you touch down, small jitter is smoothed. Slowly = about 0.1 degree per pixel, fast = coarse. Every degree gives a light tick, every 5 degrees a stronger one.
- **Aim sensitivity** under Settings › Controls: fine (default), normal or fast. **Cancel:** drag far down, then let go.

© 2026 Urs Humm. All rights reserved.

★ AIMING AND STEERING

Death head, draws, high shots, app

The strongest weapon now feels like it, going down together counts fairly for both, and no shot vanishes invisibly above the screen any more.

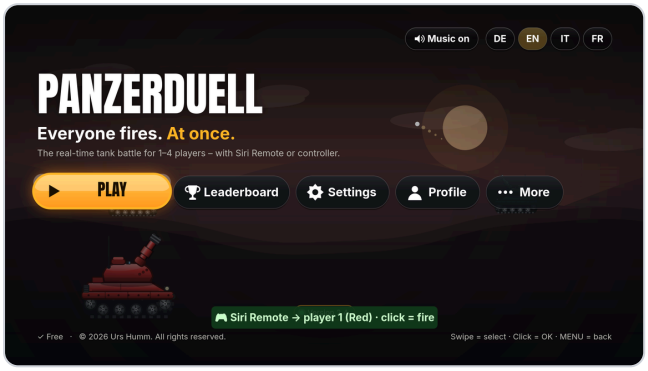
- **Guided and nuclear missile:** after launch drag left or right with your right thumb on FIRE or on the right of the field. The left joystick keeps driving, so you can dodge at the same time. Controller: right stick steers, left drives. Keyboard: aim keys steer, drive keys drive. Online the guest steers too.
- **Draw 1:1:** if you destroy the enemy and then die yourself in the same round (own fragments, fall, fire), both get a point in the score. If both thereby reach the target (“First to 3 wins”), a deciding round follows.
- **Hop always visible:** in every mode, portrait and landscape and on every device, without covering other buttons. Jet and Shield still open under “Extras”.
- **Death head** (600 $) is the ultimate weapon: 14 heavy warheads, a huge explosion with flash, a long strong quake, heavy haptics and a deep sound. Screen shake, flash and “Reduce motion” are respected.
- **High shots:** when a shot flies above the visible edge (or under the display at the top), an arrow at the top edge shows where it is and how high (▲ rising, ▼ falling).
- **In the app** (iPhone, iPad, Mac, Windows): “View website” opens the UPH website inside the app, “← Back to the game” takes you back. Links to other sites open in a window inside the app. In the browser “← UPH Home” stays as before.

© 2026 Urs Humm. All rights reserved.

★ APPLE TV

Panzerduell on Apple TV

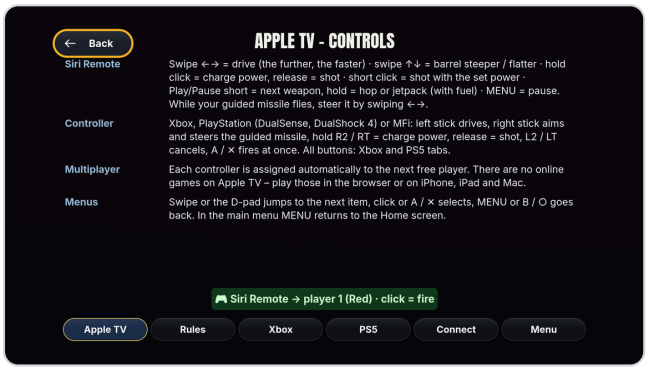
The whole game on the big screen: with the Siri Remote or up to four controllers on one Apple TV. Menus, help and settings are made for the distance from the sofa.



Main menu on Apple TV: the focus is large and clear, swiping jumps to the next item.



Hold click to charge power (ring above the tank), release to fire.



Help › Apple TV: all Siri Remote gestures and controller buttons at a glance.

- **Siri Remote:** swipe ← → drives (the further, the faster), swipe ↑↓ makes the barrel steeper or flatter – whichever way it points. Hold click to charge power, release to fire; a short click fires at once with the set power. Play/Pause short = next weapon, hold = hop or jetpack with fuel, press twice and hold = shield. MENU = pause. Steer the guided missile by swiping ← →.
- **Controllers:** Xbox, PlayStation (DualSense, DualShock 4) and MFi work as in the browser: left stick drives, right stick aims, hold R2 / RT to charge, release to fire, L2 / LT cancels. Each controller is assigned automatically to the next free player; the Siri Remote counts as a player of its own.

© 2026 Urs Humm. All rights reserved.

★ APPLE TV

Pairing controllers, menus, TV view

How to connect controllers to Apple TV, move through the menus and play comfortably on the TV in the browser too.

- **Pairing controllers:** on Apple TV go to Settings › Remotes and Devices › Bluetooth. DualSense: hold the PS and Create buttons until the light bar flashes quickly. Xbox: switch on and hold the pair button for about 3 seconds. Then pick the controller in the list and press a button in Panzerduell.
- **Online:** tvOS has no WebRTC, so there are no online games on Apple TV. Use the browser or iPhone, iPad and Mac for that – on Apple TV up to four people play together in front of one screen.
- **Tutorial:** with the Siri Remote the tutorial explains driving, aiming and charging with the remote's gestures.
- **Menus:** swiping or the D-pad jumps to the next item in that direction, click or A / ✕ selects, MENU or B / ○ goes back. In the main menu MENU returns to the Apple TV Home screen.
- **TV view in the browser:** Settings › Graphics › TV view (or open the address with ?tv=1) makes text and buttons larger and the focus clearer, and the D-pad or arrow keys jump straight to the next item in menus – ideal for a computer on a TV or projector.

© 2026 Urs Humm. All rights reserved.

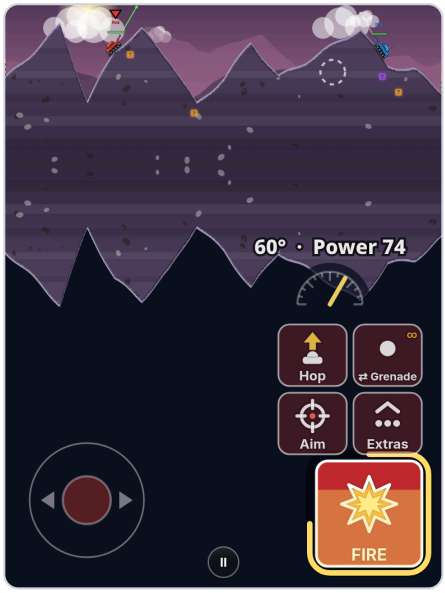
★ TOUCH: FIRE BUTTON

The whole right half fires

The right side is all about shooting: whether you touch FIRE or anywhere free above it, it always works the same – aim finely, choose the power, release.



Touch down anywhere free on the right and push slowly: the same display and the same fine aiming as on FIRE.



Hold: the power rises to 100, falls again and rises once more – release when it is right.

- **One shot control:** the whole right half (except the buttons) works like FIRE. Nothing jumps when you touch down (small dead zone), pushing slowly turns the barrel very finely, up = steeper. Release fires, a short tap fires at once, dragging far down cancels. Two fingers on the right in quick succession = zoom instead of a shot.
- **MG:** hold on the right = continuous fire, the same finger aims finely. **Buttons:** FIRE, Weapon, Hop, Targeting computer (if bought) and Extras are slightly transparent so you can see the game behind them; Weapon and Hop stay normal buttons and never fire a shot. **Siri Remote:** press Play/Pause twice and hold = shield.
- **Power swings:** as long as you hold, the power rises to 100 in about 2 seconds, pauses briefly, falls back to 5 and rises again (3 seconds with "Charge speed: slow"). That way you hit any strength, even just below 100, and keep aiming calmly meanwhile.

© 2026 Urs Humm. All rights reserved.

★ DEVICES AND BUTTONS

Longer battles, fixed buttons, mouse on the Mac

The game is the same everywhere: website, desktop app, iPhone/iPad, Mac and Apple TV.

- **Tank toughness: Quick game › More options** › “Tank toughness”: short 50 %, normal 100 %, 150 %, 200 % or 300 %; armour from the shop grows in the same ratio (+20 % per purchase, at most 160 %). Campaign and tutorial stay at 100 %; online, the host’s setting applies. **Barrel:** from 10° below the hull to 190°.
- **iPad app on the Mac, iPad with mouse or trackpad:** mouse wheel = switch weapon, right button short = hop, hold = weapon wheel, middle button = jet (hold) – as in the browser. Finger touch stays unchanged.
- **Music and pause:** the «♪» button next to «II» turns the music off and on (effects stay; keyboard: 0). Pause (Esc/P, Start on a controller, MENU on the Siri Remote, «II») contains “Settings” – afterwards the game continues unchanged.
- **Touch:** hop always sits in the same fixed spot next to FIRE (portrait: above it) – whether “Extras” is open or not. The **targeting computer** (crosshair) only appears once you have bought one: under “Extras” in “Simple” mode, otherwise among the small buttons.
- **Apps:** links open in Safari. The apps no longer show download hints or a website label; “View website” only shows “← Back to game”. Game Center: best scores and wins appear in the leaderboards. **Sharing:** “Share” and “Copy link” (website, room and friend code) open the system share sheet in the Mac app and on iPhone/iPad.

Controls per device

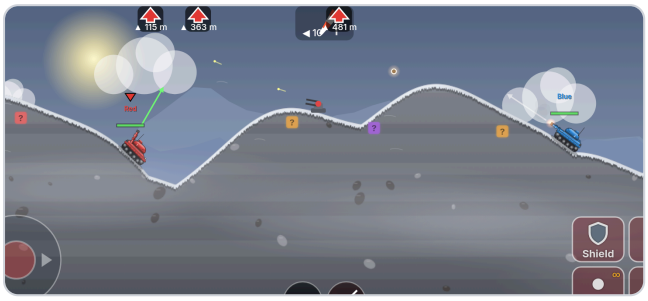
- **Browser and desktop (PC/Mac):** keyboard + mouse is the default; «Input» switches to keyboard only, Xbox or PS5 controller, «Assign mouse» sets buttons and wheel. **Controls:** Classic (default, mouse mode) or **Simple** – press at your own tank and drag away, release = shot. **Guided missile:** turns towards the pointer in mouse mode.
- **Statistics:** real time, also quit rounds and as an online guest; iCloud adds up your devices. Deleting needs a 2nd confirmation.
- **iPhone and iPad:** default «Free drag» – drive on the left (joystick), drag in the middle of the screen = aim, release = shot; fixed at the bottom right: FIRE (repeats the shot with the values set), weapon and hop, plus shield, jet and targeting computer only when you have them. **Apple TV:** Siri Remote or controller (recommended), Help › Apple TV shows all gestures.

© 2026 Urs Humm. All rights reserved.

★ GAME AND EXTRAS

Gun turret, Carbomite, achievements and leaderboards

A few things that make battles more exciting – and how you track your best scores.



Gun turret: extends two machine guns and fires wildly all around.



Achievements: 48 badges, also in Game Center.

- **Gun turret** (in the shop for $800, up to 3; also rarely in gifts): lands, extends and fires at everyone for about 20 seconds – you too. You can shoot it down.
- **Self-damage:** explosions hit everyone nearby – you too. Don't fire into the rock right in front of your own tank and don't stand next to an exploding opponent.
- **Leaderboards:** Leaderboard › Single game (highest score of one game) or Campaign (highest campaign score, best round). «Details & stats» shows player stats and recent games with date, mode, hits, accuracy, weapons and play time.
- **Colour-blind mode and power saving** (Settings › Graphics): shapes instead of only colours on tanks and displays; fewer frames per second and simpler graphics save battery.
- **Carbomite** (shop, 75 $): if you are destroyed, your tank explodes in a big fireball with a deep crater and hurls glowing fire fragments.
- **Rolling mines** really roll downhill after impact and come to rest in hollows – never higher than their momentum allows.
- **Game Center and iCloud** (Apple devices): achievements and best scores appear in Game Center; profile, progress and settings are the same on all your devices.
- **Never the same colour:** if opponents have the same or a very similar tank colour (e.g. blue and turquoise), one colour changes automatically to a free, clearly different one – only for this game; your saved favourite colour stays. The player who joins later changes (online the one joining, locally the higher player slot); computer opponents always give way to humans. In team games only the opposing team counts.

© 2026 Urs Humm. All rights reserved.

★ NEW WORLDS

Moon and Mars: their own physics

Every new world has its own gravity, air and weather. Trajectories stay just as predictable – only the pace changes.

- **Moon:** gravity 25 %, no wind, no weather. Shells fly just as far but take about twice as long. Tanks jump higher and glide longer, the jet uses less fuel. Smoke does not rise.
- **Gravity display:** to the right of the windsock an arrow with «g 25 %» shows the world's gravity. It does not appear on the classic landscapes. Aiming aid and computer calculate correctly automatically.
- **Mars:** gravity 38 %, thin air (half the wind). Dust storms: shortly before, «Dust storm: wind turns!» appears, then the wind suddenly turns – the windsock blinks.

Campaign 2 and free play

- **Campaign 2 «New Worlds»:** in the campaign menu, unlocked once Campaign 1 (20 rounds) is done – shown with a lock before that. 20 rounds, the AI gets stronger every round, new worlds join step by step. Its own save, separate from Campaign 1, also synced via iCloud.
- **Online:** new worlds are only used when all players have version 2.7 or newer. With older versions the classic landscapes are used automatically.
- **Landscapes in free play:** Play locally › «Landscapes»: Classic (8, default), New Worlds or All. The setting appears as soon as you have discovered a new world in Campaign 2.

© 2026 Urs Humm. All rights reserved.

★ FORCES OF NATURE

Wind, gravity and magnetism

On three worlds, forces visibly bend a trajectory. Aim helper, aim computer, loupe and AI calculate them exactly like the game – the path shown is the real one.

- **Super-Earth:** gravity 160 % («g 160 %» next to the windsock), tanks jump less high, the jet uses more fuel. Dense air slows every shell – the longer it flies, the more. Use more power and aim flatter.
- **Storm Coast:** the wind is always strong (15 to 90). Every 6–10 seconds a gust comes: 2 seconds before, the windsock blinks and «Gust incoming!» appears – then the wind changes. Waiting pays off. Fall over the cliff into the sea and you lose 40 health and are put back on top.
- **Magnet Mountains:** 2–3 crystals float above the peaks. Blue pulls shells, missiles without fuel and bombs, red repels. MG, laser and lightning fly unaffected. An explosion at a crystal flips it for 5 seconds – the number shows the time left. The wind is only half as strong.

Aiming, AI and online

- **Curved paths:** aim helper, aim computer and loupe show the path with every force. The AI uses the same calculation and does not fire on the Storm Coast just before a gust.
- **Campaign 2 and online:** Campaign 2 introduces Super-Earth in round 9, Storm Coast in round 11 and Magnet Mountains in round 17. Online the three worlds only appear when all players have 2.9 or newer; crystals and gusts are the same for everyone.

© 2026 Urs Humm. All rights reserved.

★ ALL WORLDS

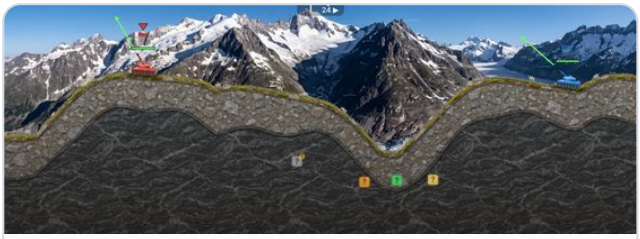
18 landscapes, each with photo and classic graphics (Settings › Graphics › «Landscape»). Terrain, hits and gameplay are exactly the same in both. Classic (1–8) is always available; you discover worlds 9–18 in Campaign 2 and can then play them under Local play › «Landscapes».



1 Gentle hills

CLASSIC

Gentle waves, little cover. Ideal to warm up: watch the wind, fine-tune the power.



2 High mountains

CLASSIC

High peaks between the tanks. Shoot steeply (over 60°) or go through the mountain with drill and earthquake.



3 Desert

CLASSIC

Soft dunes and heat. The wind is often strong – flat shots are more predictable.



4 Canyon

CLASSIC

Deep canyon in the middle. Down there you are protected but hard to get out – keep the jet ready.



5 Twin peaks

CLASSIC

Two peaks, one valley. From a peak you see far, but you are a target too.



6 Jagged land

CLASSIC

Jagged rocks cause splinters and ricochets. Short distances – machine gun and missile pay off.

© 2026 Urs Humm. All rights reserved.

★ ALL WORLDS



7 Islands

CLASSIC

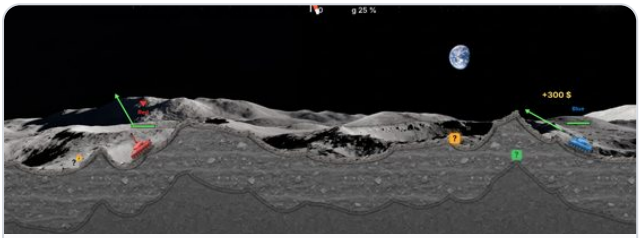
Islands in the sea. Falling into the water costs lives – don't drive too close to the edge.



8 Volcano

CLASSIC

A volcano in the middle, often at night. Shoot high and steep; ash and smoke show the wind.

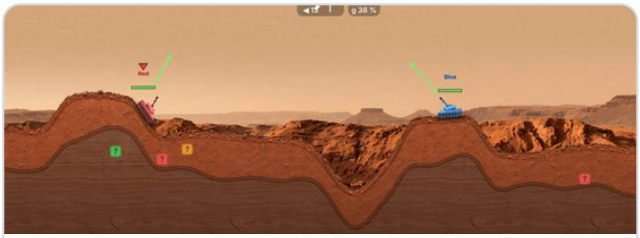


9 Moon

NEW WORLDS · CAMPAIGN 2, ROUND 5

Gravity 25 % · no wind · tanks jump high

shots fly just as far but take twice as long – a hop carries you far.



10 Mars

NEW WORLDS · CAMPAIGN 2, ROUND 3

Gravity 38 % · thin air · dust storms

watch out for dust storms – they suddenly turn the wind.



11 Super-Earth

NEW WORLDS · CAMPAIGN 2, ROUND 9

Gravity 160 % · dense air slows shots · two suns

dense air slows every shot – use more power and aim flatter.



12 Storm Coast

NEW WORLDS · CAMPAIGN 2, ROUND 11

Storm · gusts shift the wind · cliff into the sea

the windsock blinks before every gust – wait it out. Sliding into the sea costs 40 health.

© 2026 Urs Humm. All rights reserved.

★ ALL WORLDS

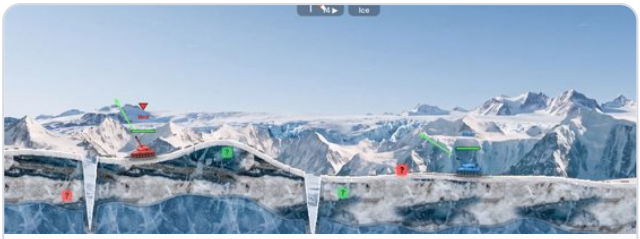


13 Magnet Mountains

NEW WORLDS · CAMPAIGN 2, ROUND 17

Magnetic poles bend shots · a hit flips the pole

the crystals pull shells and bombs. Hit one and it repels for 5 seconds.



14 Glacier

NEW WORLDS · CAMPAIGN 2, ROUND 7

Slippery ice · crevasses · snow and aurora

on the ice your tank keeps sliding – brake early. Shots into a crevasse explode deep below.



15 Bog

NEW WORLDS · CAMPAIGN 2, ROUND 1

Soft ground · big craters · fog · tanks sink in

the soft ground gives way – craters get bigger and you drive slowly. Stand still and you sink in.

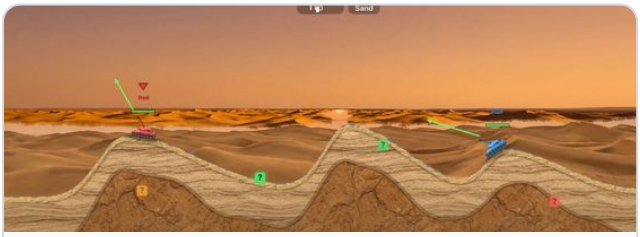


16 Deep Sea

NEW WORLDS · CAMPAIGN 2, ROUND 15

Water drag · current · buoyancy · bubbles

the water slows every shot a lot and the current keeps changing. Use more power!



17 Drifting Dunes

NEW WORLDS · CAMPAIGN 2, ROUND 13

Sand trickles after every impact · the wind shapes the dunes

after every impact sand trickles down – craters fill up and tanks slide along.



18 Lava Field

NEW WORLDS · CAMPAIGN 2, ROUND 19

Lava rises · hot updraft · the finale

the lava starts rising after 15 seconds. Hot updraft lifts shots above it – stay up high!

© 2026 Urs Humm. All rights reserved.

★ ALL WORLDS

Glacier, Bog, Deep Sea, Drifting Dunes, Lava Field

The five worlds of 3.0 change the terrain during the round. Aim helper, aim computer, loupe and AI calculate water drag, current and updraft exactly like the game.

- **Glacier:** slippery ice – tanks slide on and drive a little faster; brake early. Shots into a crevasse explode deep below. At night the aurora glows.
- **Bog:** soft ground – craters are 30 % bigger, tanks drive slowly and jump less high. The jet helps. Fog lies over the pools.
- **Deep Sea:** water drag slows every shot a lot, a current pushes it back and forth (it changes all the time – the windsock shows it). Give more power. No weather, but light rays and bubbles.
- **Drifting Dunes:** after every impact sand trickles down – craters fill up again, steep slopes slide, tanks slide along. A trench does not last long.
- **Lava Field:** after 15 seconds the lava rises in the basins («The lava is rising!»). Standing in lava costs life continuously. Above the lava, hot updraft lifts shells – stay high, aim at the opponents below. Lava Field is the finale of Campaign 2.

Campaign 2 and online

- **Campaign 2 complete:** 20 rounds – Bog in round 1, Glacier in round 7, Drifting Dunes in round 13, Deep Sea in round 15, Lava Field in round 19 and as the finale in round 20.
- **Online:** sand and lava behave exactly the same for every player. A checksum keeps comparing host and guest terrain and fixes any difference automatically. The new worlds only appear when all players have 3.0.

© 2026 Urs Humm. All rights reserved.

08 WEAPONS AND EQUIPMENT

The shell is free and unlimited. Everything else you buy between rounds in the shop – with the money from hits, kills and crates. The shop is one page: weapons, special and equipment are listed one below the other; scroll with your finger, mouse wheel, arrow keys, controller or remote – explanation, BUY and DONE stay at the bottom.

> Change weapon: **Y** / **X** (player 1), mouse wheel, **RB** / **R1** on the controller or “Weapon” on the touch screen.

Weapons

Grenade FREE
Free and unlimited.

Guided missile
Steerable in flight, limited fuel.

Cluster bomb
Splits into 5 warheads at the highest point.

Ice bomb
Freezes nearby enemies for 4.5 s: no driving, aiming, shooting and no shield.

Atom bomb
Huge crater, blinds everyone for a moment.

Teleporter
Your tank jumps to where the shot lands.

Tornado
A whirlwind sweeps across the ground for 5 s: pushes and tosses tanks and strips away terrain – yours too.

Boomerang
Flies out, turns back and explodes on first contact.

Lay mines
Lays a mine under you, armed after 1.5 s.

Drill
Drills through the terrain and explodes underneath the enemy. Unlocked from 1200 total points.

Machine gun
+40 rounds. Fast and precise, but weak.

Rolling mine
Rolls downhill after landing and explodes on contact.

Parachute cluster bomb
Opens its parachute at the highest point, floats down with the wind and scatters 6 bomblets over the target.

Air strike
Bombers carpet-bomb the target marker. Can be shot down!

Death head
The ultimate weapon: 14 heavy warheads, huge explosion with flash and quake.

Earthquake
The ground shakes and breaks away – enemies fall.

Lightning strike
Strikes the target point and jumps to nearby enemies.

Build wall
Builds a wall in front of you as cover.

Napalm
Sets the ground on fire for 6 s: damage to everyone in the flames. Unlocked from 800 total points.

Gun turret
Rare: lands, extends 2 MGs and fires wildly all around for 20 s – at you too. Can be shot down. Unlocked from 400 total points.

© 2026 Urs Humm. All rights reserved.

08 WEAPONS AND EQUIPMENT

Equipment

Jetpack
Real flying: hold the jet button.

Hover coil
Hover for about 1 minute.

Targeting computer
Shows the grenade's impact point.

Armour
+20 health permanently (max. 160).

Shield
Hold the button: deflects projectiles.

Super fuel
Double driving speed for the next round.

Carbomite
If you are destroyed: big fireball with a crater and glowing fire fragments.

© 2026 Urs Humm. All rights reserved.

09 SETTINGS

The **Settings** gear in the main menu has four tabs:

SOUND

Music on/off, pick a track or shuffle, Vehicle sounds and Weapon sounds. The speaker at the top right shows whether music is playing (amber = on, crossed out = off) – shared by website and game. New in 2.6.1: «Calm 1» and «Calm 2» – two subtle background tunes, generated right inside the game, quieter than the effects; «Calm 1» is the default. Volume under Music.

LANGUAGE

Deutsch, English, Italiano, Français.

CONTROLS

Touch controls · buttons right/left · Mac/PC: Classic/Simple · computer strength · mouse mode · power: hold or mouse distance · haptics · fair mode · keyboard layout · assign keys, mouse and controller · network indicator.

GRAPHICS

Graphics Auto/Low/Medium/High (Auto adapts to your device) · **Shake and zoom** on/off (screen shake and a brief hit zoom) · Bright flashes · **Shrapnel damage** · Full screen · Landscape Photo/Classic: “Photo” (default) shows real landscape images for all 18 landscapes, “Classic” the drawn graphics; without internet automatically “Classic”. Terrain and gameplay are the same. · Reduce effects Auto/on/off: less fire, smoke and debris in photo effects, smoother on older devices; “Auto” switches on by itself when the game stutters. Shadows, track marks, smoke, debris and sky effects (2.8) become leaner with it and at Low.

Game options

Quick game › **More options**: players 1–4 (human, computer, off), match rule (first to 2–5 wins or a fixed number of rounds: 1, 2, 3, 5, 10, 15 or 20), teams, friendly fire, shrapnel damage, tank toughness (short 50 % to 300 %), music, computer strength, mouse for player 1.

© 2026 Urs Humm. All rights reserved.

10 PLAYING ONLINE

PLAY › **Online with friends**. Two to four devices, on the same Wi-Fi or over mobile data. No account, no sign-up.

1 **Your friend code**
Everyone gets an 8-character friend code. Add it once, and they stay in your friends list.

2 **Invite via WhatsApp**
Send your code or room link via the share menu – WhatsApp, iMessage, SMS. One tap on the link and your friend is in.

3 **See who is online**
The friends list shows who is online right now. Just tap: join their open room or invite them directly.

4 **Over mobile data too**
If a direct connection isn't possible, the game runs through a relay server. If the connection drops, the game reconnects automatically – your tank waits for you.

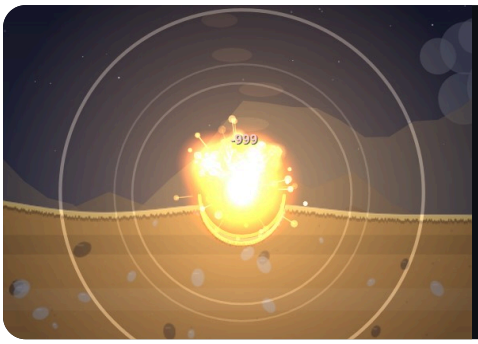
The device that creates the room runs the game: everyone sees the same hits, craters and fragments. In the room everyone drives the **tank they designed**; the host sets the strength of each computer slot (Easy, Normal, Hard).

Playing with Game Center (iPhone, iPad, Mac)

Online › "Game Center: invite" opens the Game Center window: invite friends, contacts or a Messages group, or use "Quick Match" to find opponents (2–4 players). "Find opponents" searches automatically right away. An invitation from Messages, Game Center or the Games app opens Panzerduell directly. Whoever invites is the host and sets the rules. Without Game Center, room code and link work as before.

© 2026 Urs Humm. All rights reserved.

11 TIPS



Keep your distance: a destroyed tank explodes in a fireball and hurls 6 to 12 glowing fragments around. They blast small craters and hurt nearby tanks – even setting off chain reactions. Can be turned off under Settings › Graphics › “Shrapnel damage”.

- **Feel instead of distance:** with “Power: Hold button” you charge every shot with the mouse button.
- Mind the wind: the indicator at the top shows direction and strength.
- The targeting computer from the shop shows where your shell will land.
- **Shield at the right moment:** hold the key just before a projectile hits – it bounces off.
- Keep moving – standing still makes you an easy target.
- Collect money on parachutes and “?” crates on the ground – sometimes they hold a curse.

12 HELP

All keys in the game as well: **More** › **Help & controls**.

Controller not detected

Press a button on the controller while the game is in the foreground. In the browser, the controller is only detected after the first button press. Pairing guide: in the game under Help › Connect.

A key does not respond

Check whether the key was reassigned: Settings › Controls › Assign keys … › “Reset all”. Some keyboards cannot register many keys pressed at once – a controller helps.

The game stutters

Settings › Graphics › choose “Low”: fewer particles, fragments and effects.

The online connection drops

If a direct connection isn’t possible, the game runs through a relay server. If the connection drops, the game reconnects automatically – your tank waits for you.

Installing on a Mac

Open the DMG (double-click) and drag “Panzerduell” onto the “Applications” folder. First launch: **right-click** (or Control-click) Panzerduell › “Open” › “Open” again. This is needed because the app is not notarised by Apple. From macOS 15, “Open” may be missing: then go to System Settings › Privacy & Security › “Open Anyway”.

Installing on Windows

Run “Panzerduell-Setup.exe”. No administrator rights needed. If Windows SmartScreen appears: **“More info”** › **“Run anyway”**. The warning appears because the app is not signed.

Panzerduell – a game by UPH. Idea, concept and rights: UPH. Music: UPH (uphofficial.com). Contact: info@uph.ch

© 2026 Urs Humm. All rights reserved.