

GIBBY'S GUIDE TO VIRTUAL REALITY!

FOR THE OCULUS QUEST 2

MORE THAN 130 EXPERIENCES
TRIED AND TESTED!



the future
and beyond



V3 | APRIL 2021 | HAND TRACKING SPECIAL!

- MEET DENNY'S KUHNERT | HAND PHYSICS LAB!
- NEW! ANIMATION, FILM & GAME REVIEWS!
- THE LINE, BABA YAGA, PAPER BIRDS!
- CUBISM, THE CURIOUS TALE OF THE STOLEN PETS!
- WALTZ OF THE WIZARD NEW! DAEDALUS, VR ANATOMY!
- THE ISS EXPERIENCE: ADVANCE, BLACK HOLE POOL!

LET YOUR FINGERS DO THE TALKING!

Put your controllers away! Welcome to the **hand tracking special** - the 3rd edition of this easy-to-follow graphical guide-cum-fanzine for all those new and old to VR and the Quest 2!

Meet Dennys Kuhnert, the genius mind behind **hand physics lab**, the experimental showcase for flexing the fingers on **p13!**

Also pushing the boundaries are Oculus themselves with the tech demo **tiny castles**. Fling, warp, crush & punch on **p11!**

Interactive animations are some of the best experiences VR has to offer, and hand tracking takes it to another level. Watch Emmy award-winning **the line**, an all-star cast in the brilliant **baba yaga** and the magical **paper birds**. See reviews on **p15**.

Games like **the curious tale of the stolen pets** and **waltz of the wizard** are headliners in hand tracking innovation. Puzzler **cubism** just added the feature. Wander over to **p16!**

For a more beta feel try the amazing free walking VR experience **tea for god**, or get drawing with **mr scribbles**. See **p11**.

GOING MAINSTREAM!

And that's just for starters! These are exciting times for VR. Since launching in October 2020, the Quest 2 is set to become **the first mainstream VR headset**, outselling all previous Oculus devices released over the past five years **combined**.

For a full list of available apps see the official Oculus Quest Store **here**, App Lab **here** and Sidequest **here**.

Click on any image or **highlighted text** and it will take you to the content. Enjoy!

If that's not enough, check out these experimental apps: Tickle the ivories in **virtualpiano**, be a sorcerer's apprentice in **elixir** and play with your toy train set in **hand tracking demos**. Woo-woo!

It's pirates ahoy in the **hand posing tool** and you'll never look at your digits in the same way again after trying **handspace!**



NEW RELEASES!

Watch **the iss experience: advance**, the second release of the largest production ever filmed in space. Go into orbit on **p17!**

Cutting edge online VR **film festivals** are in Taiwan, Denmark and Germany on **p25!**

Vertical Robot's classic **daedalus** takes off, and get in the elevator for **floor plan 2!**

A couple of demos to look out for are **vr anatomy**, a serious tool for medics, and **black hole pool**. Get potting on **p11!**

FREE STUFF!

A huge number of films and animations and a third of the games & apps you'll find here are **free** or have **free demos!**

All of the content in this quick start guide are positive recommendations of stuff I like, it's not meant to be an exhaustive list. I'm not into horror or zombies. I don't want to be a soldier, and social vr is not for me. Each to their own!

Note: I don't own a gaming pc so none of the recommended apps use Oculus Link!

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KEY



hand tracking



perfect for seated



best in roomscale



fitness



puzzle | adventure



creator tool



sports games



meditation



possible motion
sickness



TIPS! tips on **p27**

BABY STEPS!

ABSOLUTE BEGINNERS!


I just got it out of the box, now what do I do?! Turn it on by doing a short press of the button on the right side of the headset. You can turn it off by doing a long press! It'll go into standby on its own.

Download the Oculus app to your phone! Find it [here](#) or [here](#). You have to pair it with your headset via bluetooth.

Set up your account! You'll have to link it to a valid Facebook account (required). Enter your bank details, and you are ready to install some apps!

Hints, guidelines, tips and tricks! When you are ready be sure to read the basics on [p5](#)!

Set up your Guardian boundary! Clear some space in your room and follow the tutorial in the headset. Be careful and aware - don't faceplant the fireplace or tread on your cat!

The Oculus button is your best friend! See that one marked with ? It's the one that is depressed under the joystick on the right controller. A long press will always re-centre your view and a short press will exit any app back to the menu.

Charging! The green light means it is fully charged (you get about two hours), orange means it is charging, white means it is in use and it turns red when there is only 10% of the battery left.

HAND TRACKING!

Turn it on! Go to settings > device > hands and controllers > and toggle hand tracking on. Point and pinch to select and scroll. Access the menu at any time by holding an OK sign towards you with your right hand. See [here](#) for gestures.

Introduced in December 2019 as an experimental feature, it still feels very much in beta but when it works it's like some kind of freaky magic! It uses the built-in cameras so make sure you have plenty of light and contrast!

I JUST WANNA PLAY!

Want your first 'wow'?! A great start is the interactive animation **the line**, see [p15](#). You don't need to learn how to use the controllers, and you get the magic of seeing your hands! You can play seated or roomscale. Lasts 20 mins.

No, I mean a game! OK, simple controls but high-octane is the cinematic bullet hell of **pistol whip**! For something a little more sedate try the mind-blowing experience of **down the rabbit hole**. Both are the best VR can offer! See [p8](#).

HINTS, GUIDELINES, TIPS AND TRICKS

BASICS

Look after the lenses! Never leave them exposed to sunlight, even for a few seconds! Never clean the lens with anything but a lens cloth (your t-shirt can scratch them). I keep mine turned away from the window and always have a cloth on hand. Or use a lens protector when not in use.

Covid-19! Use a third-party removable silicon cover and wipe with alcohol 70% if you share the headset. Never use alcohol on the lenses! To avoid irritation wear a sweatband underneath!

Set your IPD! IPD is the distance between your pupils (interpupillary distance). Once you get this dead on, it makes a world of difference - no more blurry edges! It's fixed at 58/63/68mm options on Quest 2, but you can manually force in-between settings. You can use a ruler and a mirror or the [quest IPD](#) app.

Passthrough! Enable this so you can double-tap on the side of your headset at any time. Useful as your menu background: settings > virtual environment > passthrough.

Setting the boundary! It's a necessary evil but you can make it better. You can hide the stationary boundary virtual walls. Go to experimental features > stationary boundary: passthrough. Lower roomscale boundary sensitivity in guardian settings to avoid more immersion killers. If you have firmware v26 you can add a couch in experimental features. You can switch the guardian off entirely in developer mode - at your own risk!

Headphones! The Quest 2 has built-in audio but nothing compares to plugging in some 3D noise-cancelling headphones for that full immersive experience!

Warm it up! To avoid lens fogging when you start a session, stick the goggles on your forehead to warm them up for five minutes!

Motion sickness! Some people are more susceptible than others. If you are new to VR avoid games marked with this symbol 🌀 until you get your VR 'legs'! Avoid 'smooth locomotion' in games.

e n j o y



film & animations!

Film was my entry into VR and is still my first port of call. Interactive animations are a whole new level of magic. These are my top nine!

one!



wolves in the walls 🏠
app | US\$9
do you believe me? 40m

two! review p15



the line 🏠 🤖
app | US\$5
Emmy award winner 20m

three! review p17



luna 🏠 🚗
app | US\$15
back to life 1-2hs

four! review p17



the iss experience 🚗
space explorers | US\$3
episode II: advance 33m

five! review p15



baba yaga 🏠 🤖
app | US\$6
protect the forest! 22m

six!



the key 🏠
app | free
where am I from? 20m

seven! review p17



battlescar
app | US\$6
girls invented punk! 28m

eight!



bonfire 🚗
app | US\$5
play fetch with creatures
from an alien jungle! 20m

nine! review p15



paper birds 🤖
app | US\$5
music and light! 19m

extra! live theater



**dr crumb's school for
disobedient pets** | US\$99
2-4 players together 50m



vr film festivals
see p25



vr archive film festival
see p20

quillustrations!

Quill Theater is integrated into OculusTV. It has immersive playback for films and the ability to toggle between any artist-defined angles for illustrations. Here are nine fantastic films and three amazing artists to follow!

review p18



lifetime achievement parade | free
the lengths Yonatan Tal goes to for his mama! 15m

review p18



peace of mind
blue zoo | free
bing bong! dream interpretation 5m

review p18



the multiverse bakery
studio syro | free
first of the tales from the soda island series 5m



the beast
blue zoo | free
I dreamt of nothing but the mountain 5m



four stories
nick ladd art | free
simultaneous quartet of fun tales 12m



goodbye mr octopus
atlas v | free
Stella reads a letter from her mother 8m



the remedy
daniel peixe | free
seminal comic-book 10m



the neon jungle
studio syro | free
more from soda island! 5m



le voyage de bibou
soubaël | free
quel suspense! 5m



goro fujita
quill theater | free
prolific genius and daily quillustrator!



léa peirano
quill theater | free
check out her tribute to studio ghibli!



tyler friedel
quill theater | free
missouri-based freelance animator

amazing stuff!

Here's my current top twelve favourite games and apps!

one!



pistol whip 🏠 ❤️

app | US\$25

shoot to the beat in a 'cinematic bullet hell'!

two!



audio trip 🏠 ❤️ TIPS!

app | US\$20

rave to your own tunes, customise choreography!

three!



red matter 🧩

app | US\$25

surreal & spectacular sci-fi adventure in space

four!



the climb 2 ❤️ 🌀 🎮

app | US\$30

epic free solo climbing - now with skyscrapers!

five!



down the rabbit hole 🧩 🎮

app | US\$20

gorgeous alice in wonderland prequel!

six!



the room vr 🧩 🎮

app | US\$30

beautifully rendered detective mystery!

seven!



moss 🧩 🎮

app | US\$30

magical mouse diorama!

eight!



a fisherman's tale 🏠 🧩

app | US\$15

macro to micro seafaring!

nine! review p16



cubism 🧩 🎮 TIPS! 🎮

app | US\$10

puzzle, piano ... and peace!

ten! review p16



the curious tale of the stolen pets 🧩 🎮 🎮
app | US\$15
touch that cuteness!

eleven!



myst 🧩 🎮

app | US\$30

remake of 1993 classic!

twelve!



virtuoso 🎮 🎮

app lab | free

trip out on your own loops!

more amazing stuff!

For how to use **app lab** or **sidequest** see p27. Buy and try on the official store - you get an automatic refund if you've played for less than two hours and within 14 days of purchase. And look out for sales!



i expect you to die 🧩 🚗
app | US\$25
007-style escape rooms!



shadow point 🧩
app | US\$20
mystery in Inverness!

review p16



waltz of the wizard 🧩 🚗
app | US\$10
like Disney's *Fantasia*!



gadgeteer 🧩
app | US\$15
incredible machine building!

cover feature p13



hand physics lab 🚗 🚗
app | US\$10
zany hand tracking tricks!



yupitergrad ❤️ 🌐
app | US\$15
Russian spiderman?!



1976 back to midway 🚗
app lab | US\$15
ingenious 2D arcade to vr!



crazy kung fu ❤️
sidequest | US\$10
quicker than the human eye!



pixel ripped 1995 🚗
app | US\$20 | dlc US\$15
hilarious pixel nostalgia!



phantom: covert ops 🚗
app | US\$30
not my fave genre - but
stealth kayaking?!



gravity sketch 📄 🚗
app | free
3D design and modelling!



the final overs 🏠 🌐
app lab | US\$10
i don't like cricket-ah
i love it-ah!

multiplayer!

Play with friends or randoms!

one v one



blaston 🏠❤️

app | US\$10

duelling - never stand still!

one v one



eleven table tennis 🏠🌐

app | US\$20

AI ping & multiplayer pong!

up to four



real vr fishing 🌐🚗

app | US\$20

let's go fishing - in Korea!

up to six



walkabout mini-golf 🌐

app | US\$15

with epic space course!

up to ten | co-op



warplanes 🚗🚗

app lab | free demo | US\$15

WWI missions!

* free demo on app lab

one v one | co-op



racket nx 🏠❤️🌐

app | free demo | US\$20

some kinda future squash!

* free demo on sidequest

social



multibrush 📝📌 TIPS!

app lab | free

three-dimensional painting!

social



the under presents 🎭

app | free | US\$ in app

open world theatrics!

up to five



synth riders 🏠❤️

app | free demo | US\$25

custom rhythm game!

* free demo on app lab

up to six



wander 🚗

app | US\$10

google street view!

ten v ten



hibow 🏠❤️

sidequest | free

flying & archery!

one v one



war yards

app lab | free

gunslingin' guffaws!

experimental!

Early access, pre-release, demos ... there's a lot of quality **free** stuff out there, but support the 'devs'!



ancient dungeon beta
app lab | free
hilarious pixel adventure!

hand tracking!



tiny castles
app lab | free
incredible hand tracking
tech demo from oculus!



beat smith
sidequest | free
seated air drumming to
Brazilian death metal!



gorilla tag
app lab | free
completely stupid, totally
hilarious multiplayer!



flowbourne
app lab | US\$10
breathing meditation from
abdominal movements



peco peco
app lab | US\$10
make the Mars rover and
remix giant 3D puzzles!



traVRsal
sidequest | free
walk around your own art!

hand tracking!



tea for god
sidequest | free
non-euclidean geometry!

new release!



organon vr anatomy
app lab | free demo
serious 3D tool for medics

new release!



black hole pool
app lab | free demo
pot the balls in any order



yur
sidequest | free
cross-app virtual 'fitbit'!

hand tracking!



mr scribbles
sidequest | free
use your paws to draw!

older stuff!

These titles have been ported from their original on the Oculus Go

new release!



daedalus 🧩
app | US\$5
the amazing sensation of flying - by vertical robot!



wrong voyage ex 🧩
sidequest | free
spiders! zombies! retro!



nature treks 🧘 🚗
app | US\$10
meditation in vivid wild environments



coaster combat 🎮
app | US\$10
theme park ride action!



thumper
app | US\$20
you need insane reactions to beat the boss!



dead and buried II
app | US\$20
comedy cartoon zombie cowboys attack!



end space 🚗
app | US\$15
classic space battles!



bait! 🎮 🚗
app | free
silly hippy fishing



ultrawings 🚗
app | US\$15
relaxing arcade flight sim



cosmic flow 🧘 🚗
sidequest | free
fractal meditation



anne frank house 🚗
app | free
explore the house of WWII diarist Anne Frank



mission: iss 🎮
app | free
zero gravity inside the international space station

dennys kuhnert

Hand Physics Lab is riot of cartoon hand tracking fun

'The future will be based on this, that's for sure. Everything we do in life in general, like using a phone, will be replaced by hand tracking. The way hands are perceived has been drastically changed,' says Swiss neuroengineer and VR developer Dennys Kuhnert.

A world-leading expert in the application of hand tracking technology, Dennys released his solo project Hand Physics Lab on April 1. Many apps have added integration, but this is the first to be designed this way from the start.

'Human, brain and machine interactions have always been my passion,' says Dennys who co-founded Holonautic Studio in 2018 with Roger K ung after both quit their jobs in biotech for their 'crazy and risky' venture.

'It's incredibly powerful, it feels magical. It's a natural instinct to want to touch things,' continues Dennys. 'We are playing with the brain's capacity of overcharging the visual cortex so, for example, you might think you feel resistance to a heavy cube but you are actually just pushing air.'

Hand Physics Lab has a playful cartoon design with 85 daft puzzles to solve with your bony hands. It starts off with baby steps but then things get harder - and weirder.

'You can have the most mind-blowing experiences, like being able to do a handshake with a clone of yourself or detaching your hands and still controlling them. Where is the limit of the mind and how far can we extend it?'





'In the absence of any other proof', Sir Isaac Newton once opined, 'the thumb alone would convince me of God's existence.'

Has Denny's relationship with his own hands changed? 'Yes, definitely. That's the beauty of it actually because you basically rediscover your hands. Many times, in day-to-day activities like eating, I saw myself playing with my hands or trying to make some weird finger gesture,' he muses.

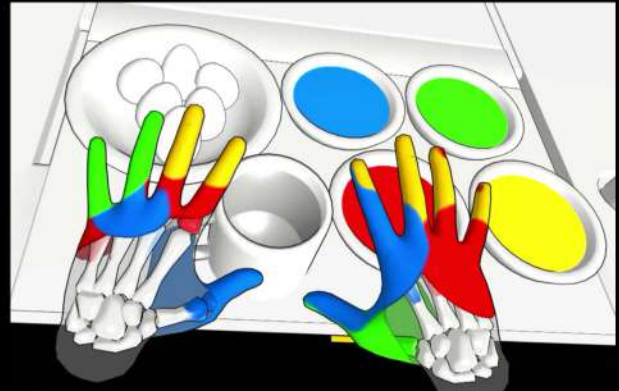
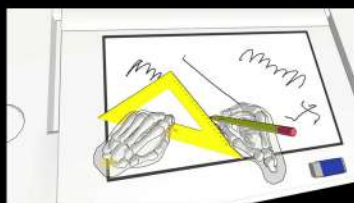
Last week's reveal of a prototype AR wrist band from Facebook Reality Labs (watch [here](#)), shows that major advances are just around the corner.



Meanwhile, it's clear that the tech itself is still in beta - this app is a lab, after all - but it's all great fun.

Finger-painting, Jenga, flinging planets into orbit, being a pupper-master - it's like being in mind of a hyperactive child, all to the Dance of the Sugar Plum Fairy.

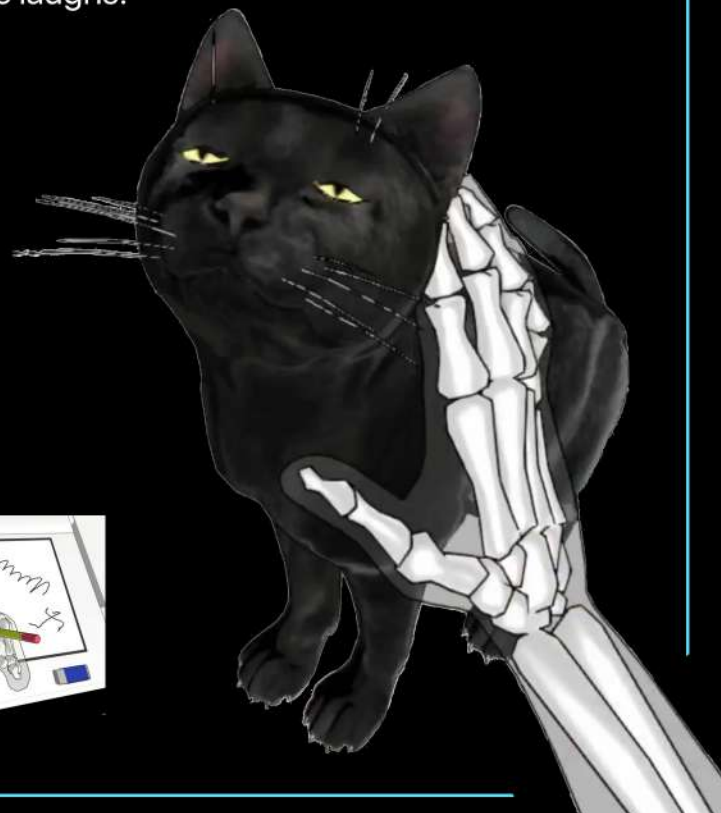
Hand Physics Lab is available now for US\$10 from the official store [here](#).



Remote controlling a toy car with finger gestures is a unique joy, and you can even have your very own 'Alas por Yorick' moment - 'a fellow of infinite jest' - playing with a skull.

The undisputed star of the show, though, is the virtual pet black cat.

'Everyone wants to know about the cat! Currently he's called Mr Snuffles. He not too stupid but also not too bright, you can stroke it, it reacts. People wanted to know if you can throw it around and you can but you shouldn't - it's a cat!' he laughs.





animations



Paper Birds | 20m

'The morning breeze was my favourite part of the day' declares Toto, a flat-capped boy playing a *bandoneon* (a type of concertina) in this quintessentially Argentinian animation directed by German Heller and Frederico Carlini.

You are free to follow his notes with hand tracking, creating blue neon swirls along with his chords, before the tale takes a mysterious twist. Grandfather's darkest secret is revealed and two worlds intertwine.

Get ready for the second and final instalment coming in mid-2021 - if you haven't stopped gazing in wonder at the handcrafted stop-motion imagery of the opening act.



Baba Yaga | 22m

The wild witch of centuries of Slavic folklore, Baba Yaga, fixes her piercing green eyes on two brave young daughters of a sick village chief in this interactive animation from Baobab studios.

Magda (voiced by Daisy Ridley) and Sasha - that's you - must go into the dangerous forest to get the witch blossom cure from the enigmatic old hag (Kate Winslett) to save your mother (Glenn Close).

Yes, it's an all-star cast - and all-female - and although the hand tracking interaction is minimal it is spectacular, from taking a lantern from your sister to unleashing thunderbolts of thorns. There are multiple endings - which path will you chose?

The Line | 20m

A love story between Pedro and Rosa, two miniature dolls on a scale model of 1940s São Paulo. Narrated by Rodrigo Santoro, this Emmy award-winning tale from Brazilian studio Arvore is a showcase hand tracking experience.

games



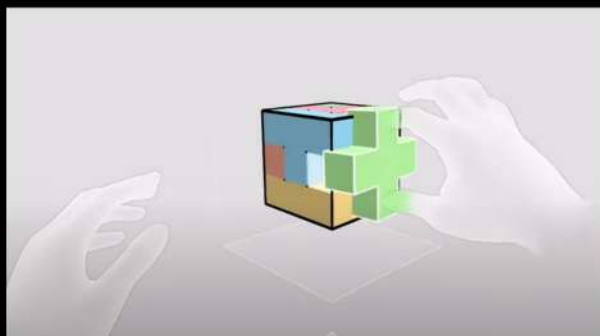
The Curious Tale of the Stolen Pets | US\$15

'I remember when you used to smile like that,' says your top-hatted grandfather as another pet pops out, grinning widely.

You'll be laughing too. Curious Tale by Swedish developer Fast Travel Games is as cute as a kitten. As soon as you push Spot on the swing in the summer house you'll be hooked. It's short, but bliss.

Poking and prodding around the five floating islands with hand tracking enabled is a childish joy. From a day-glo T-rex to a rainbow-coloured unicorn, there's 23 of the little creatures to find.

Throw in some Scandinavian folktronica by Wintergatan and a snow-melting mini hairdryer and you've got a unique tonic.



Waltz of the Wizard: Extended Edition | US\$10

Flinging lightning bolts and casting spells with your own fair hands, it feels like you are in Disney's *Fantasia* in this classic title from Icelandic VR company Aldin.

With a huge 'natural magic expansion' upgrade imminent (watch the trailer [here](#)), fans of the finger-catapult and the talking hands with googly eyes are in for treat.

A fiendish comedy runs through Waltz of a Wizard as you are given free reign to explore magical spaces, with a talking skull as your best friend.

There's a unique 'telepath' movement system (or you can actually run!) and even a disability feature if you are missing a finger or two. Outstanding value.

Cubism | US\$10

This gem of a puzzle game just added hand tracking with a lot of care. Thomas van Bouwel has created 60 puzzles but don't be fooled by the early easy ones. Achieve zen-like tranquility with gentle piano music. Dark mode recommended.



film & animations



The ISS experience pt II | 33m

Advance is the second of a four-part series aboard the international space station by the vanguard of VR filmmaking, Félix Lajeunesse and Paul Raphaël.

Rejoining the crew, the film zooms in on the role of women and astronauts Anne McClain and Christina Koch pay tribute to Jerrie Cobb, blocked by Nasa from her own space flight 50 years earlier.

'Science is organised curiosity' declares Anne, as Christina tends to her precious mizuna greens growing incongruously amongst the tech.

The largest production ever filmed in space yields lovely intimate moments and a spectacular upside-down group hug ends with two leaving the mission.



Battlescar | 28m

'We are gonna grab Alphabet city by the balls!' As loud, angry and energised as the 1978 New York punk scene it portrays, Battlescar follows two teenage runaways - Puerto-Rican American 16-year-old Lupe and her *blanquita* friend Debbie.

Created by Argentine director Nico Casavecchia, it tilts from cut and paste Sniffin' Glue zine-style to riding on the back of a stolen motorbike in a flash. Words stab the screen. Dark, urgent and edgy, Battlescar takes you on a trip down dangerous alleyways, punk legend Elda Stiletto's squat and the infamous CBGBs.

Rosario Dawson narrates to a backdrop of white guitar noise - and even a little Screamin' Jay Hawkins. Death is certain. And punk was invented by girls.

Luna | 1-2hs

This beautiful story of the reconstruction of a world that's been blown off-course seems to chime perfectly with the times. Part interactive animation, part game and part meditation, Luna stars a young red Bird who must reawaken a broken planet.



quillustrations



Lifetime achievement | 15m

Leaning on the comic traditions and style of Tex Avery and Chuck Jones, this tear-jerker is a riff on the value of presence over presents.

Former Disney animator Yonatan Tal, who set up LA-based Parade Animation, draws on the love for his own mother (he declares as much in the opening credits) as he weaves a fast-paced fable that flies from secret caves in South Indonesia to albino crocodile hunting in Africa.

High-flying French designer Albert - so ritzy that 'Lorenzo is my exclusive gold supplier since 94' - is trying to make the ultimate gift for mama. But will the quiet tea-drinking septuagenarian be impressed?



Tales From Soda Island | 3x5m

An astonishing series of three (so far) Quill animated shorts from Studio Syro - all set in the bright pink universe of Soda Island, with smoothie beavers and peace-loving *nekoalas*.

In *The Multiverse Bakery*, a chef bends space-time and cooks from lightening bolts and squirrel acorns. At the start of *The Neon Jungle* a humanoid *tadpolotl* emerges from the water after a crab digs up a geometric shape.

It's eye-popping fun and beautifully smooth. A techno candyland version of 60s cartoon *Wacky Races* completes the trio in *The Quantum Race*. At times fantastically minimalist and always wordless, Soda Island is fizzing with life.

Peace of Mind | 5m

A slightly confused Mr Burridge enters an austere waiting room where he's told to wait for his 'live dream interpretation experience'. The unseen overworked technician Jason is keen to hurry things along, ignoring his pleas that 'this is not a dream, it's a recurring nightmare!'



OPTIONAL FAIRY LIGHTS!

PROTECTIVE
LENS COVER!

1m USB-C
METAL CABLE!

FAUX LEATHER WASHABLE
UPHOLSTERY!

5800mAh
POCKET POWERBANK!

3D 360° NOISE
CANCELLING PHONES!

pimp your quest 2!

Kingo USB-C 1m metal cable US\$4

Newzerol VR silicone face & lens protective cover US\$23

SYNCitDeep in-ear headphones US\$20

Bonai 5800mAh external powerbank US\$23



50 FILMS
AND ANIMATIONS FROM 2014-2020

8 HOURS
TOTAL RUNNING TIME

FREE!
* JUST FOUR ARE PAID-FOR

**JUST CLICK THE
LINKS TO WATCH!**

**USE A SWIVEL CHAIR AND HEADPHONES
FOR YOUR BEST VIEWING PLEASURE!**

**RESOLUTION MAY BE FOUND
WANTING IN OLDER TITLES!**



films



YouTube VR



Download these apps from the Oculus store. [Oculus TV](#) is pre-installed. All *non-interactive* films and animations here are **free** except where stated.

2020



2nd step
[vimeo](#) | US\$3
from the moon to mars 11m



everest vr
[oculus tv](#) | free
journey to the peak 40m



the people's lawn
[app](#) | free
wacky composite of 45
activists 3m

2019 don't miss!



the before times
[youtube vr](#) | free
did we know where we
were going? 7m



-22.7°C
[youtube vr](#) | free
DJ Molécule in the Arctic.
Jan Kounen directs 9m



immerse
[oculus tv](#) | free
best underwater film 9m

don't miss!



traveling while black
[felix & paul](#) | free
Jim Crow era 20m



the overview effect
[oculus tv](#) | free
astronomical metanoia 6m

don't miss!



1st step
[vimeo](#) | US\$3
moon trip on Apollo 11 14m

* [youtube vr](#) app limits resolution. Watch on [firefox reality](#). Add Firefox Ad blocker extension. Click quality setting (up to 8K) | Turn off subs | Click full-screen > goggles and choose 360 stereo.

* On [oculus tv](#) download cache to watch in high res. Watch [vimeo](#) on firefox reality.

films II

2019



gorillapalooza

within | free

hang out with mountain gorillas in Rwanda *6m*



cesare's dream

youtube vr | free

the cabinet of dr caligare - what is reality? *6m*



dive blue planet vr

youtube vr | free

incredible guided dive with octopus *9m*



iceland's glaciers

youtube vr | free

'what happens to ice, happens to us' *7m*



tales from the edge

youtube vr | free

wingsuit base jumping with Jeb Corliss *9m*



the atomic tree

within | free

400-year-old bonsai that survived Hiroshima *10m*



pompeii

youtube vr | free

the heart of the eruption *french language 8m*



okavango experience

youtube vr | free

astonishing wildlife in the Okavango Delta *4 x 6m*



polar obsession

youtube vr | free

seals in Antarctica *7m*



free solo

youtube vr | free

climbing El Capitan solo style *6m*



700 sharks

within | free

the largest gray shark pack in the world *7m*



isle of dogs

youtube vr | free

stop motion studio *6m*

films III



the real thing
within | free
 Chinese fakes of Paris,
 Venice and London 16m



airpano vr jellyfish bay
youtube vr | free
 breathtaking underwater
 film in Indonesia 3m



dolphin man - the dive
within | free
 world record holder in
 free diving 6m



uaxuctum
youtube vr | free
 orchestral interpretation
 of a Mayan legend 7m



**charlie checkers goes to
 brazil! youtube vr | free**
 six-year-old Charlotte's
 imaginary journey 7m



2017
space explorers
felix & paul | US\$3 each
 amazing nasa docs
 2 x 20m



zero days vr
within | free
 documentary on the fourth
 dimension of war 21m



sanctuaries of silence
within | free
 the last silent wilderness
 7m



alteration
oculus tv | free
 disturbing experimental
 AI sci-fi 17m



save every breath
youtube vr | free
 WWII dunkirk 1940 4m



2016
nomads
felix & paul | free
 maasai mara, yak herders
 and sea gypsies 3 x 12m



2014 don't miss!
strangers
felix & paul | free
 just a guy making music
 8m

animations

2020



the dawn of art
youtube vr | free
the cave of forgotten
dreams 10m

2019 don't miss!



ayahuasca
oculus tv | free
Jan Kounen's jaw-dropping
Amazonian trip 18m



le soleil d'edvard munch
youtube vr | free
french language
warning: intense! 10m

2018



dreams of henri rousseau
youtube vr | free
genius rendition in a
Parisian greenhouse 7m



crow the legend
within | free
from the makers of
Madagascar! 22m



jurassic world
app | free
apatosaurus & blue
2 x 3m

2017



the spacewalker
within | free
first human walking in
space 4m

2016



invasion!
app | free
aliens try to take over the
Earth! 6m



asteroids!
within | free
aliens onboard! 7m

don't miss!



dreams of dali
youtube vr | free
inside a Dali painting 6m



pearl
youtube vr | free
Oscar-nominated tale of
father and daughter 6m

2015



the butcher
youtube vr | free
run, rabbit, run! 2m

film festivals

Online VR film festivals have content on the Quest 2 available for the duration on various platforms. If dates unknown, last year's are in **grey**.



kaohsiung vr film lab
taiwan
apr 2 - may 31



cph:dox
denmark
april 21 - may 12



lichter
germany
april 27 - may 2



tribeca
usa
june 9-20



cannes xr
france
july 6-15



venice vr expanded
italy
aug 28-sept 5



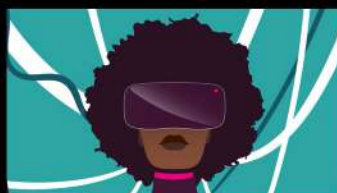
viff immersed
canada
sept 30-oct 10



raindance immersive
uk
oct 27 - nov 6



vr days
netherlands | nov 4-6
7th edition



electric africa
south africa | nov 5-11
2nd edition



360
france | nov 23-27
6th edition



hyper
brazil | nov 28
6th edition

recording vr

Want to make your own films? A decent kit now costs under US\$1,000 ...



insta360 one x 2
camera | US\$430
5.7K 30fps



zoom h3-vr
audio | US\$250
spacial audio



manfrotto tripod
accessory | US\$180
reliability



extended selfie stick
accessory | US\$40
10ft telescopic stick
for drone effect



dive case
accessory | US\$80
underwater to 45 meters

Or go pro ...



insta360 pro 2
camera | US\$4,599
8K 30fps



editing vr

You can do it on a phone, I use a mac



mac book pro
laptop | varies
OSX 10.14+



insta360 studio 2020
app | free
stitching | v3.5.4



final cut pro X
app | varies
editing | v10.4.9

HINTS, GUIDELINES, TIPS AND TRICKS

OTHER SOURCES

App Lab! There are now over 100 apps on the 'official non-official store', App Lab. Although the apps aren't advertised you just need to go [here](#) for a continually updated list.

Buy and try what you like just as on the main Oculus site.

TIPS!

audio trip Install your own songs in .ogg format into the app's folder using android file transfer. To customise choreography, see tutorial [here](#).

multibrush The original paid-for app, tilt brush, went open source in January 2021. See [here](#). For a beginner's online course see Danny Bittman's channel on youtube [here](#).

jur Install on sidequest. Sign up. Will work across all apps.

traVRsal In advanced settings, turn guardian sensitivity to Low. Minimum required play space is 1.5 by 1.5 meters. With more space, recommended tile count is 4-5. To add your own photos in the Virtual Gallery create a folder called 'UserImages' and, using android file transfer, add to android > data > com.wetzold.traversal > files

cubism To add custom puzzles see [here](#).

Sidequest! Be a beta-tester! Sidequest is an early access alternative to the main store.

It's a once-only set up. Download the app on to your mac or pc [here](#). Then sign up as a developer [here](#). It's quick and easy.

Then put your Quest 2 into developer mode in the phone app: settings > oculus quest 2 > more settings > developer mode.



Launch Sidequest, connect the Quest 2 via USB to your computer and click 'allow' in the headset.

Choose your apps and click 'Install to headset'.

Find them in your headset under apps > all > unknown sources. Just click to play.

Standard disclaimer: 'Running apps from unknown sources may put your account and device at risk'.

HINTS, GUIDELINES, TIPS AND TRICKS

SHARING

Recording video! To record in 16:9 aspect ratio, connect the Quest 2 via USB to your computer, open sidequest and go to the tools menu. Change resolution to 1080. Turn full rate capture to On (records in 72fps not 30fps). Note: defaults reset every time you turn off the Quest 2. Turn off the red dot recording light in settings > device > video capture indicator. To record in mixed reality, you'll need a green screen and a couple of apps. See [here](#). Or try [this app!](#)

Casting! It's a bit laggy and often cuts out unless you are on a 5G network, but casting is a great way to share in real time what you can see in the headset for others to follow on a TV, phone or computer. Follow [this](#) guide to set up. Be aware it eats the battery fast!

Streaming! Pretty simple to set up. Just go to sharing > go live. Note: some developers don't allow you to stream from their apps.

Multi-user! You can add up to three other facebook accounts in addition to yours on a single headset. Go to experimental features > multiple accounts and library sharing. There's an accounts section in settings to add an account and you can switch between them by clicking on your profile image. Useful to keep game progress save settings apart.

App sharing! This officially only applies to new apps from Feb 2021, but it's expected that most apps will add this function. It *doesn't* mean you can share apps you own to another headset but it *does* mean that apps purchased on the primary account are playable on different accounts on the same shared device. For the official line and fine print see [here](#).

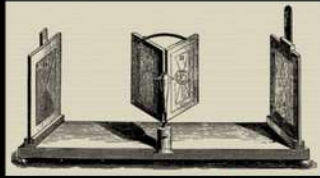
Got a Go? The precursor from Oculus to the Quest and Quest 2. Download my other guide by clicking on the image!

OCULUS GO



vr timeline

A brief history of VR from 1838 to the launch of the Quest 2 in 2020. Headset (HMD) development is in **green**, cameras in **yellow** and general in **blue**.



1838

stereopsis
stereoscope



1935

pygmalion's spectacles
sci-fi story



1956

sensorama
vr booth



1968

sword of damocles
first hmd



1989

1979
vital helmet
military hmd



1985

nasa view
astronaut simulator

vpl research
first vr company



1991
virtuality
vr arcade



1995

virtual boy
gaming hmd



2010

oculus rift prototype

facebook buys oculus
2014



multi-camera rigs
gopro jump
2015



2025?

standalone 5G glasses



quest 2

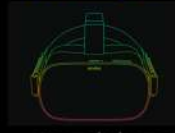
2020



quest

2019

insta360 pro 2
8K pro cameras



standalone hmds go

2018

insta360 one x
5.7K cameras

tethered hmds
oculus rift htc vive psvr

2016

gear 360
4K cameras

gear vr cardboard
phone hmds



WTF DOES THAT MEAN?!

GLOSSARY

vr terms | **3dof** (three degrees of freedom) restricted to following head movement like the Go **6dof** (six degrees of freedom) allows free movement with a 3D space, like the Quest 2 **UI** user interface **FFR** (fixed foveated rendering) a way to economise processing power by keeping hi-res in the centre of your vision and lo-res at the periphery without impacting on your ... **UX** user experience! **agency** the ability to act in and influence a vr environment **refresh rate** the higher the refresh rate, the smoother the visual experience. The Quest 2 can run at 90hz, with 120hz expected as an experimental feature soon **latency** the delay between your action and the headset's reaction **inside-out tracking** the method the Quest 2 uses to map your 3D space using in-built cameras **PCVR** vr tethered to a gaming pc, for example through the oculus link cable **HMD** head mounted display i.e. a headset **FOV** field of view - the Quest 2 is 92° horizontal (compared to our 200° -220° in real life) **XR** cross-reality - industry term for anything vr & ... **XR** augmented reality **XP** experience **LBE** location-based entertainment eg vr arcade **sideload** just copying files to the headset's hard drive **devs** the developers - our heroes!

gamer terms | **FPS** first-person shooter **wave shooter** vr space invaders genre **rail shooter** from a fixed position **jump scare** cheap horror trope **NPC** non-playing character **spawn** the live creation of a game object **god-mode** turns the game into a ... **diorama** miniature interactive illustration **DLC** downloadable content (game add-ons) **sandbox** open-world exploration **non-euclidean geometry** in hyperbolic space, everything moves! **melee** close combat **bullet hell** subgenre of shoot 'em ups where it rains projectiles **virtual beings** artificial people powered by AI **roguelike** derived from the seminal 1980 video game Rogue. According to the International Roguelike Development Conference in Berlin in 2008 it is turn-based, uses random dungeon generation, permadeath and hack-and-slash gameplay. Not to be confused with **roguelite** which can be summarised as 'procedural death labyrinths' **pancake** pejorative term for flat non-VR games **gunstock** 3D-printed weaponry that attaches to the controllers **discord** forum for gamers and developers **haptics** a physical buzz of the controllers to simulate touch **dojo** training area **elite strap** cheap plastic accessory that still sells despite endless reports of breakages!

PRIVACY

As you know, the Quest 2 **requires a facebook account**. This is currently being challenged in the courts in Germany for violating antitrust laws. See [here](#).

Remember that with inside-out tracking, **the information from the cameras seeing your room is sent to facebook**: 'When you set up the Oculus Guardian System to alert you when you approach a boundary, we receive information about the play area that you have defined.' That information is unspecified.

Facebook also **collects biometric data on your physical features** like your height and hand size; your voice (if not disabled) and your location. For more information, see the Oculus legal documents [here](#).

According to a paper in the respected scientific journal Nature, a simple machine learning model can **identify participants from less than five minutes of tracking data** at above 95% accuracy. See [here](#).

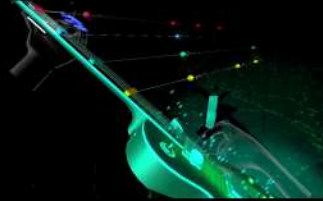
You can **feedback** to Oculus about these or any other issues [here](#).

coming in 2021!

Watch the trailers for these new titles due for release!



frustrain 🧩
app | Q3
surrealistic railroad thriller!



unplugged: air guitar 🦋
app | tbc
hand tracking rock!



yuki ❤️
app | Q2
anime bullet hell!



green hell 🧩
app | Q4
survival in the Amazonian
rainforest!



song in the smoke 🧩
app | tbc
prehistoric mystical world!



i expect you to die 2 🧩 🚗
app | tbc
more 007-style escape
rooms!

future stuff!

Right here, right now!



inwith corp
site | TBC
ar contact lenses.
no more headsets?



next mind
device | US\$299
non-invasive neural interface.
control vr with your mind!



volumetric video
site | TBC
spacial walk-around film!

THANK YOU!

10,000 DOWNLOADS SO FAR!

'LOVE IT!' 'EPIC!'

'I've never seen a more complete document about VR before!'

'BRILLIANT GUIDE!' 'A BIG HELP!'

'It's absolutely amazing. I love to see clear up-to-date guides that work for everyone'

'A+!' 'VERY COOL!' 'GREAT JOB!'

'I love it. So comprehensive and saves me hours of looking all this shit up myself!'

'SENSATIONAL!' 'AWESOME!'

'Your guide has finally convinced me to pull the trigger and buy a Quest 2'

'EXCELLENT RESOURCE!'

'You have done a great service to many in the community'

'FANTASTIC WORK!'

'This will help many, many people to dive into VR!'

I'm as passionate about VR as when I first dived in in 2016. After all, it's not every day that a completely new medium - a new art form - comes along in your lifetime.

Feedback! Please send me yours, plus any corrections and suggestions to my reddit: [u/uncledefender](https://www.reddit.com/user/uncledefender)

I'll keep this guide updated regularly!

And I'll keep it free and ad-free. Please share and repost. I don't wanna be a youtuber or podcaster, so I'm an OG pdf-er! To stay independent I don't earn anything from click-throughs and I pay for all apps. All opinions are my own. If you appreciate my efforts and found this guide helpful you can ...



Buy me a coffee



MADE IN BRAZIL