



MANUAL

Training, setup and support

Onboarding, trainer operation, adapters, care, troubleshooting and training modules.

As of: 07.10.2026

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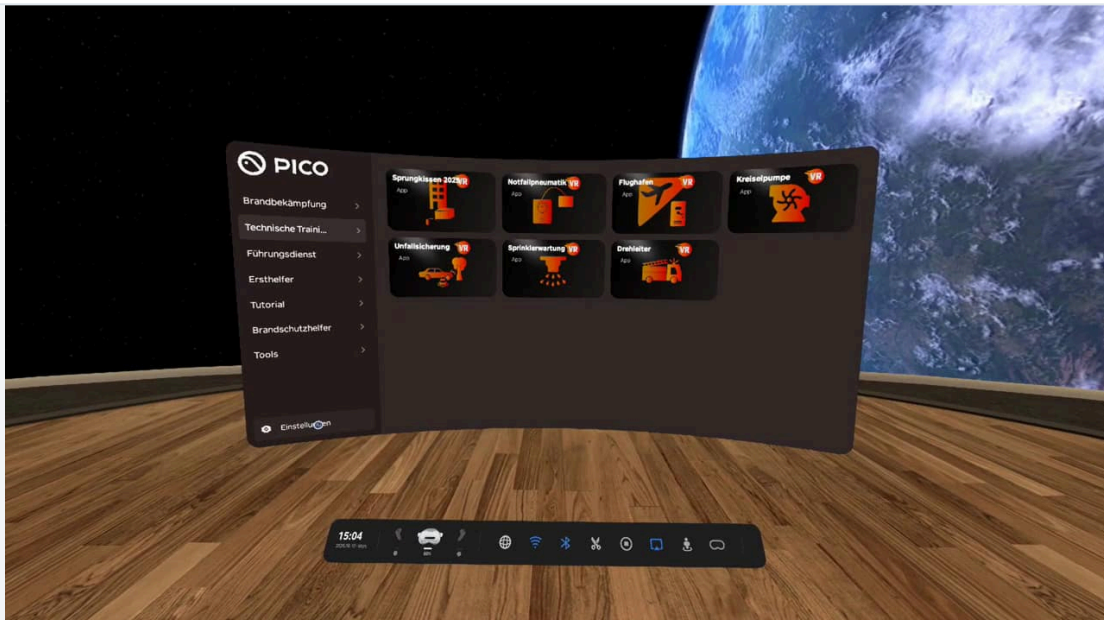
Quick start

For the first use, a stable, quiet process counts. First start technology, then instruct users, then open the training.

- | | |
|---|---|
| <p>1 Open the suitcase and prepare all the components.</p> <p>3 Clear at least 3×3 meters, define real safety zone and do not leave on a virtual border.</p> <p>5 Set up image transfer so the coach can see what is happening.</p> <p>7 Start the subject module and let it just try it out.</p> | <p>2 Turn on the headset and controller, check the battery.</p> <p>4 WLAN set up when updates, support or browser streaming are needed.</p> <p>6 Perform VR tutorial or mini onboarding.</p> <p>8 After training, clean, load and store properly.</p> |
|---|---|

Note set

Erst Technik stabil bekommen, dann Nutzer einweisen, dann Anwendung starten.



Start menu of VR glasses with Firefighter VR Training menu

Onboarding Checklist

For the introduction date, this compact list is sufficient as a red thread.

Setup and start

- ☐ Check case contents briefly, headset, controller, charger, haptic components, adapter, HDMI set and power bank.
- ☐ Turn on headset, point power button and explain long pressure for start or turn off.
- ☐ Check battery level, show Powerbank and charging connection.
- ☐ Clear training area, at least 3×3 meters, keep swivel area for the jet tube and fire extinguisher clear.
- ☐ Start the headset freely so that the cameras can see the ground.

9 and support

- ☐ Set up WLAN or Hotspot and briefly show WLAN menu.
- ☐ Explain that updates come automatically when the glasses are online.
- ☐ Explain that WLAN also helps with support, because errors can be better understood.
- ☐ Before appointments and after longer offline use bring the glasses into WLAN.

Headset and controller

- ☐ Put on headset correctly, adjust headband and check seat.
- ☐ First question after putting on: Is the picture sharp?
- ☐ IPD only change if image or wear really does not fit.
- ☐ Glasses wearers: Slide headset straight from the front over the glasses, take headbands up and straight forward when set down.
- ☐ Explain right and left controllers, show trigger, grip, joystick, menu button and home/recenter.
- ☐ Show the battery compartment of the controller, explain AA batteries or batteries.

Safety and care

- ☐ Never hold lenses in the sunlight or leave them open in the sun, car, window sill or outdoor area.
- ☐ Clean lenses only dry with microfiber cloth or glasses cleaning cloth.
- ☐ Face-shield and case may be disinfected, then wiped dry if necessary.
- ☐ For many users, rotate face shields or plan a short dry time.
- ☐ In case of dizziness, nausea or insecurity, pause immediately.

Streaming and Trainer View

- ☐ Show set, T comes to the glasses, R comes to monitor, TV or beamer.
- ☐ Power supply for transmitters and receivers.
- ☐ Explain power bank on the transmitter, because the HDMI transmitter pulls strong battery.
- ☐ If not in use, activate standby and remove the stick or briefly load the glasses.
- ☐ Show browser or Smart TV in the same WLAN as an alternative.
- ☐ iPad do not plan as a standard way for control or image transmission.

Modules and follow-up

- ☐ VR Tutorial Start and Click, Grip, Move and Open Menu Practice.
- ☐ Open training overview and briefly show suitable modules.
- ☐ Fire extinguishers: Install nozzle adapters, ring adapters and button adapters, insert controllers and make short functional tests.
- ☐ Fire extinguisher: Select fire source, select extinguishing agent, extinguish, explain feedback and automatic restart.
- ☐ Fire extinguisher: open B-Knopf, show fire extinguisher settings, Passthrough, briefly explain fire strength, task explanation, spray button and automatic restart.
- ☐ Blast tube: Install front adapters and side adapters, turn on controllers, point the click button on the beam tube and test teleport.
- ☐ Blast tube: Select real beam tube, explain tracking tip, flow and foam menu.
- ☐ CPR and Planspiel if necessary as a deepening or additional appointment.
- ☐ YouTube Playlist, manual, FAQ and calendar link.
- ☐ Take more employees early so that the system does not depend on one person internally.
- ☐ Actively solicit feedback, especially for unclear spots, mistakes, balance topics and wishes.

Field of use of the manual

This guide bundles general VR handling and the most important Firefighter VR instructions for training, onboarding and support.

- Basic operation, safety, care and troubleshooting
- haptic modules such as jet tube, fire extinguisher and CPR
- Training modules, events, Planspiel, exploration and GodView
- In-depth videos and module pages for details of individual scenarios

Components and preparation

Firefighter VR is intended as a self-sufficient suitcase system. For regular operation, no PC, no server and no additional IT infrastructure is required.

Typische Komponenten

- VR headset, usually PICO 4 Ultra Enterprise
- Two VR controllers, one left and one right controller
- Charger and USB-C Cable
- Pre-installed training software
- haptic training components depending on the package, for example jet tube, fire extinguisher or CPR exercise doll
- Jet tube accessories with front adapter, side adapter and optional rear cover or C hose
- Fire extinguisher accessories with nozzle adapter, ring adapter and button adapter
- Wireless HDMI set for image transmission
- Transport cases, manual, FAQ and video instructions

Check before any training

- ☐ Headset geladen
- ☐ Controller charged or batteries full
- ☐ Linsen sauber
- ☐ Face-Shield sauber
- ☐ Adapter vorhanden
- ☐ Training area free
- ☐ Image transmission prepared
- ☐ WLAN or hotspot available if necessary

Koffer und Inhalt

Ihr mobiler Firefighter VR Koffer besteht aus den hier gezeigten Hauptkomponenten.
Sollte etwas fehlen, wenden Sie sich bitte direkt an uns.



FIREFIGHTER VR
The Training Experience

Luggage contents with labelled components

Preparing training surface

The person with headset sees their real environment only limited or not at all. Remove tripping traps and create a clear training area.

Raum vorbereiten

- at least 3x3 meters of free area per station, swivelling area for jet pipe and fire extinguisher
- Remove chairs, bags, cables, boxes, glasses and low objects
- Raum gut beleuchten
- Avoid mirrors, glass surfaces and highly reflective surfaces as much as possible
- when moving always keep an accompanying person next to the active person

Startposition

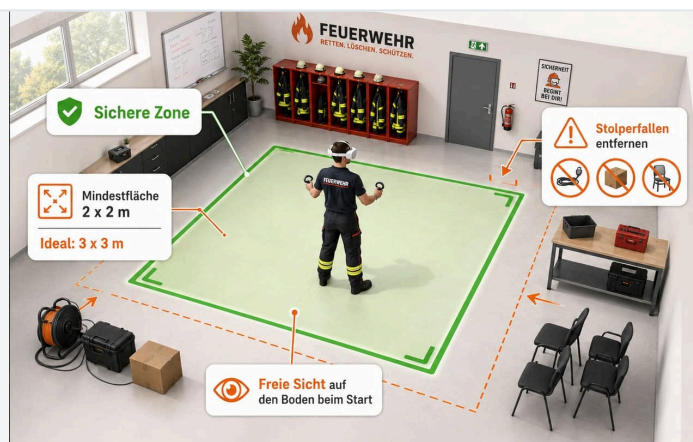
- Turn on headset in free place
- Cameras to see the real floor
- Do not start directly at the desk, under a table or in front of boxes
- If ground height is wrong, restart headset or adjust ground height in the scenario

Guardian / Boundary bleibt aus

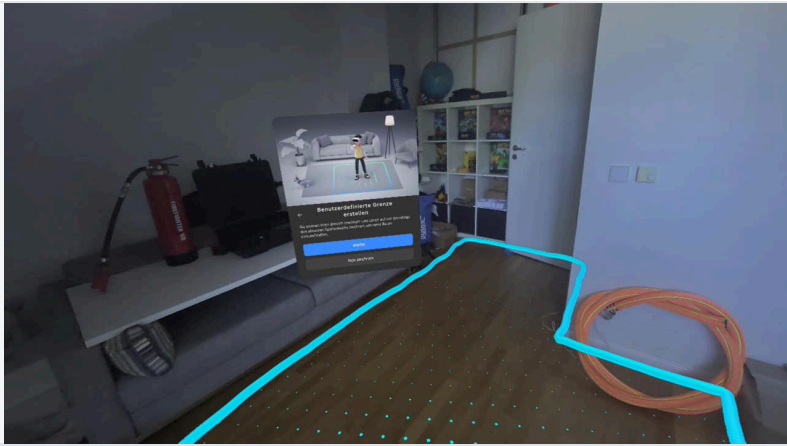
The virtual space boundary of the PICO is deliberately deactivated at Firefighter VR because AR applications need free movement. An artificial border disturbs the process. The real area and the top view secure the area – especially the pivoting range of branch and fire extinguisher.

Important

The real area and active supervision are crucial. Make sure that no person walks into the training area and that the active person does not bump against furniture, cables, tripods, screen technology or other participants.



Training area with a safe zone



PICO Play Boundary Menu

Turn on and operate headset

Turn on

Hold the Power button for a few seconds until the headset starts. The starting process can take up to about one minute. At the end of an appointment, no one has to log out of an app. When the headset is no longer needed, hold the power button for a long time and turn it off.

Statuslicht am Headset

- permanently lit: headset starts or is in operation
- blau blinkend: Headset schaltet aus
- rot blinkend: Akku niedrig
- Off: Sleep Mode or Off

Laden

- rot: Akku sehr niedrig
- yellow or white: device charges
- green: device is fully or nearly fully charged

Standby

For short breaks, a short press on the Power button is enough. The headset goes into standby mode and is activated again when re-mounted by the proximity sensor.

Participant change

In event scenarios such as forest fire or Flashover, standby is a practical change trick: briefly press power, put off glasses, wait a few seconds, the next participant puts on the glasses. In other scenarios, there is often a restart button, a buzzer or an automatic restart after evaluation.

Restart and Hardware Reset

If the headset is no longer responding or the image is frozen, hold the Power button for at least 10 seconds. This forces a restart.

IPD and image sharpness

The pupil distance in everyday life usually remains on the medium setting. Change it only if someone reports clear double vision, severe blurring or an unpleasant wear. The first question after putting on should always be: Is the picture sharp?

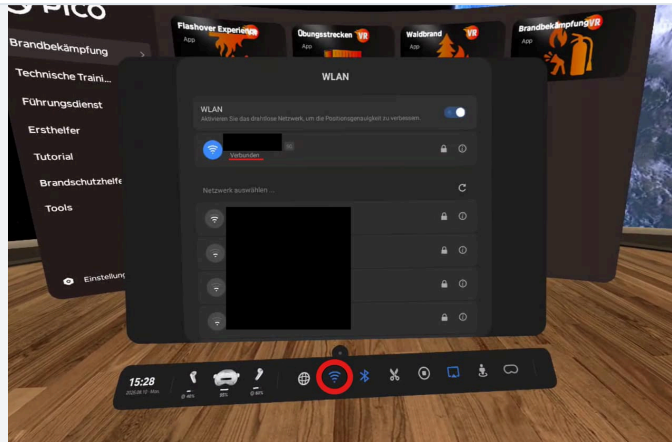


Position of the power button and status LED

ONLINE IF POSSIBLE, OFFLINE IF NECESSARY

WLAN, Updates and Offline Use

The trainings can basically be used offline. WLAN is still important for updates, support, browser streaming, smart TV and multiplayer in Planspiel.



WLAN Verbindung erfolgreich hergestellt

Warum WLAN?

- automatische Updates
- besserer Support
- Browser Streaming
- Smart TV
- Online card data in GodView or Planspiel

Best Practice

- Regularly connect headset with WLAN
- Do not update at the last minute before important dates
- schedule time for updates after longer offline use
- After updates, briefly open and test the desired app

Online Kartendaten

Google Maps and other external online map data require Internet. Offline, existing local content remains usable, but external map sources do not.

Image transmission and trainer view

Image transfer is one of the most important levers for good guidance. Without it, the person in the glasses only inaccurately describes what he sees.

HDMI-Set

Robust for events and included. T comes to the headset, R to monitor, TV or beamer. Both sticks need electricity. If the image is upright, press the button on the receiver once or several times until it is in landscape format. The rotation is on the receiver, not in the glasses.



USB-C on HDMI Adapter, transmitter T and receiver R

Smart TV or Beamer

Works if headset and target device are in the same WLAN. Convenient, but dependent on the network.

Browser

Connect headset and laptop in the same WLAN, start Screencast and open the displayed address in the browser.

HDMI Akku Hinweis

The HDMI transmitter draws a lot of battery and should be supplied via the rear power bank. If the transmitter only runs over the glasses, the running time can significantly decrease and image errors can occur. During breaks, activate standby and unplug the stick when it is not needed.

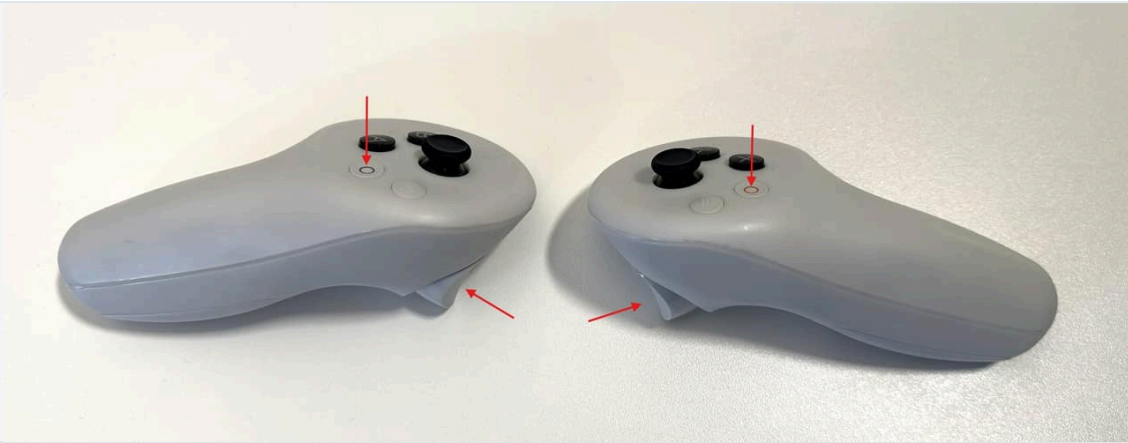
Powerbank flexibel nutzen

The power bank can either support the HDMI transmitter or, if no HDMI image transmission is needed, directly supply the glasses. For long bets with a stable WLAN, Screencast plus power bank on the glasses can make more sense.

iPad

A iPad should not be planned as a standard way for control or image transmission. Standard are monitor, TV, beamer or laptop.

Grundbedienung in VR



Controller with marked buttons

Interaktionen

- Looking around with your head
- Show with controller
- Trigger zum Klicken
- Grip zum Greifen
- Menu button for settings
- Joystick or teleport for movement

Recenter and Home

The purple home button on the right controller is important. Short pressure leads to the main menu or system menu, long pressure resets viewing direction and position.

Head-Control-Mode

If a controller is not connected, the PICO interface can be operated with a limited head pointer. The selection is made via the volume buttons on the headset.

Coupling controllers

Unrecognized controllers can be coupled in the controller settings. To do this, keep the Home button and trigger pressed at the same time until the LED flashes red and blue alternately.

Menu in Firefighter VR

- In many training sessions, the B-Knopf opens the Firefighter VR main menu.
- Point to a menu item with the controller and confirm with the trigger.
- System and training can be reset to restart a training.
- In the extinguisher module, the most important options are under extinguisher settings.

Tutorial and onboarding best practices

Many people put on VR glasses for the first time. Therefore, the tutorial or a short mini onboarding should be before the specialist training.

- | | | | |
|---|--|---|--------------------------|
| 1 | Put on the headset and check the seat. | 2 | Enquire image sharpness. |
| 3 | Kurz umschauen lassen. | 4 | Click Practice. |
| 5 | Practice gripping. | 6 | Open and close the menu. |
| 7 | Erst danach Fachtraining starten. | | |

Trainerhinweise

- Explain only one new interaction at a time
- kurze konkrete Anweisungen geben
- early success experiences
- Mistakes not commenting unnecessarily
- Actively involve waiting group via streaming

Motion sickness and discomfort

VR can lead to dizziness, nausea, eye strain or uncertainty in some individuals. This is normal and not an operating error.

Vorbeugen

- langsam starten
- First letting new people sit down
- Using teleportation instead of fluid movement
- Do not force fast rotations
- Offer for longer units after about 30 minutes of break
- Taking off headset at break and looking into the distance

Sofort pausieren bei

- Schwindel
- Nausea
- Kopfschmerz
- Augenbelastung
- Desorientierung
- Unsicherheit

Teleportation is usually much more pleasant for beginners than smooth running by stick.

Cleaning, hygiene and care

Face-shield and housing

Plastic surfaces, housing and face shield can be cleaned with suitable cleaning cloths or disinfectants. Then wipe dry if necessary.

Linsen

Do not treat lenses with alcohol, wet wipes or aggressive cleaners. Use a dry microfiber cloth or glasses cleaning cloth.

Change or rotate Face-Shield

The face shield is magnetically inserted and can be removed. At events, it is pleasant to use two or more face shields: one is worn, one is cleaned and can dry. Especially with heavy sweating or makeup should be cleaned directly and wiped dry.

Spectacle wearers

Smaller glasses can usually be worn under the headset. Slide the headset straight from the front over the glasses, then pull headband backwards. When dropping off, first fold up the headband and remove the headset straight forward. The enclosed spacer can be used if glasses or bridges of the nose press too hard.

Sun and UV light

The lenses must never be exposed to direct sunlight. They can act like a magnifying glass and permanently damage the screen. This also applies in the car, on the windowsill, on the balcony, when set up in the pavilion or when briefly depositing outside.



Linsenreinigung, Face-Shield, Brillen Spacer

Akkumanagement

The headset is loaded via USB-C. For longer training or events, the store should be actively planned.

- Headset directly reload after longer trainings
- hanging briefly on charging current during pauses
- Use standby when no one is wearing glasses
- HDMI withdraw transmitters if no streaming is needed
- Powerbank am Transmitter nutzen
- with low battery power bank directly connect to the glasses, if no HDMI transmission is needed
- Provide controllers with batteries or batteries



Standby, change of participants and battery management

Beware of 30 to 35 percent

If the headset battery gets too low, the glasses can get into a power-saving area. Then under certain circumstances the full performance is no longer available and individual glitches become more likely. Reload early for events.

Event-Kit

For events, plan a strong USB-C power supply, a longer USB-C cable and an easily accessible socket. Short loading windows with low rush are often enough to get through the day.

Limitations of use and role of VR

Firefighter VR makes processes visible, enables repetition, lowers entry barriers and allows situations that are really difficult, expensive or dangerous to train.

Strengths

- Wiederholung ohne Verbrauchsmaterial
- Safe practice without real danger
- anschauliche Demonstration
- motivierender Einstieg
- Vorbereitung auf Praxisanteile
- Group debriefing

Grenzen

- No complete replacement for real device operation
- No substitute for prescribed hot training or proof of practice
- no guarantee for real security of action without further training
- depending on onboarding, support and task

fire safety helper module

For fire safety helpers, VR is particularly suitable for repetition, annual instruction, motivation and preparation. Initial training with real fire will not be replaced.

Target groups and forms of application

Target group or case	Dauer pro Person	Passende Module	Empfohlene Form
Fair, Open Day, Recruiting	3 bis 5 Minuten	Fire, fire extinguisher, 18	short onboarding, coach takes over navigation
Youth fire brigade and junior work	5 bis 15 Minuten	Forest fire, fire extinguishers, first aid, exercise tracks, turntable ladder	Playful entry, group watches by Screencast
Fire education and prevention	5 bis 10 Minuten	Fire extinguisher, office fire, electronic fire, first aid	short task, clear feedback, no long menus
Feuerwehr Grundausbildung	10 bis 20 Minuten	Interior fire, forest fire, exercise tracks, accident safety, first aid	Tutorial plus guided task
Respiratory protection, squad leader, instructor	10 bis 20 Minuten	Interior fire, Flashover, cargo area fire, oil area fire, forest fire	technical task, comparison of several solutions
Machinists and technique training	10 bis 20 Minuten	Kreiselpumpe, Drehleiter, Notfallpneumatik	Quiet mode, explaining step by step
Works fire brigades and special situations	10 bis 20 Minuten	Flughafen, Gastankbrand, Sprinklerwartung, Notfallpneumatik	scenario-based with short debriefing
Leadership and tactical training	frei konfigurierbar	Planspiel, Erkundung, GodView	Gruppe als Einsatzleitung einbinden

Example procedures

5 minutes, event

- Start application and streaming in advance
- Ask briefly about VR experience
- Put on headset
- Just look around, click and explain a main action
- Performing a simple task
- Clean and start next person

20 minutes, small group

- Explain training objectives
- Enable streaming
- Onboard first participant
- Run the task
- Group observes
- Brief debrief
- second run with a different strategy

45 minutes, training session

- professional introduction
- VR goal and safety rules
- Tutorial or Mini Onboarding
- baseline run
- debrief
- optimised run
- Transfer to real processes

Structure for VR learning units

Set expectations, practice core interactions, easy first task, professional task, debriefing, second run and transfer question. So VR remains a learning tool and is not only for demonstration.

Firefighter VR at events

For public events, a short, safe and repeatable process counts. The active person should quickly have a sense of success, while coaches and spectators can understand what is happening at any time.

Building on site

- Plan a clearly defined 3×3 meter zone only for the active person
- Separate the screen, explanation, waiting and technology
- Pavilion, shade or interior use, no direct sun on the lenses
- Hold a tripod, cable and spectator outside the movement surface
- With a jet tube, keep enough distance, the real device has weight

Geeignete Module

- Forest fire and fire extinguishers are particularly suitable for short runs
- Kid mode or use simple settings when it comes to getting started quickly
- Planspiel, exploring and technical modules are more likely to show for advice or specialist audiences
- Jumping pillow only accompanied and not used as a loose child module

Participant change

- Headset kurz per Power-Taste in Standby setzen
- Put down glasses, check face-shield and clean when necessary
- After a few seconds, the next person
- Proximity sensor wakes the headset up again
- For modules with evaluation, explain the automatic restart or buzzer

Event-Kit

- Disinfectants and kitchen paper
- Microfibre cloth for lenses
- Additional face shields if available
- Strong power supply and long USB-C cable
- Powerbank geladen
- HDMI set, monitor or beamer
- AA batteries or charged batteries for controllers

Sprungkissen als Sonderfall

With the jump cushion, participants can physically perceive the falling moment very strongly. No nudges, no frightening, no small children. A carer should stand directly behind the active person and secure in case of doubt.

Children and young people

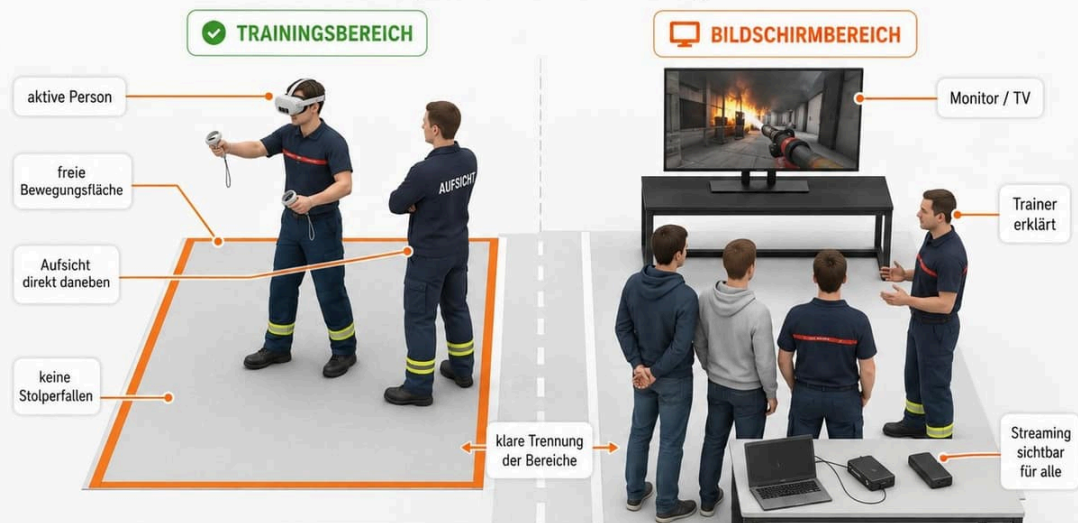
For young children, the seat, head size, headset weight and branch weight must be realistically checked. If the headset is not seated safely or the device cannot be held still, the training should not be performed. The organizer sets a suitable age limit and suitable scenarios.

Akku Ablauf

Under about 30 to 35 percent battery recharge early. With HDMI operation, the power bank supplies the transmitter as far as possible. With WLAN streaming, it can instead be used directly on the glasses.

EVENTAUFBAU: TRAININGSBEREICH UND BILDSCHIRMBEREICH

Firefighter VR bei Veranstaltungen



Event setup with separate training area and screen area

Firefighter VR

The haptic adapters are for many customers the point where Firefighter VR really becomes tangible. Therefore, branch and fire extinguisher in onboarding should be fully set up and tested briefly. The old video recordings show the fire extinguisher still double-sided adhesive tape on the upper button adapter. In the current version, this adapter is no longer glued, but clicked on the lever.

Basic rule

First attach the adapters cleanly to the real tool, then use the controllers. Do not work with violence. A little pressure is normal, but if a part is not plausible, first check alignment and adapter position.

Videoanleitungen

The complete jet tube setup is additionally available as a video:<https://youtu.be/BdzFXkyGvnc>

Further training instructions are in the YouTube playlist:https://www.youtube.com/playlist?list=PLUHDIfmthtJMu_aWEyADWwCese3vmtkZL

Fire extinguisher overview:

<https://youtu.be/1DNdbUTxNJc>

Jet tube, scope of delivery and preparation



Jet tube with front adapter, side adapter, left controller and right controller

- Prepare jet tube
- Prepare front adapter, here comes later the left controller
- Ready side adapter, here comes later the right controller
- Provide rear cover or alternatively couple a standard C hose
- optionally a hose can be weighted as needed, for example with sand
- Provide right and left controllers

Jet tube, attach front adapter



Set front adapter with notch on the rubber nose and slip over the rubber ring

- 1 Den Frontadapter zuerst anbringen.
- 2 Place the notch of the adapter on top of the rubber nose on the front segment of the jet tube.
- 3 Put the adapter down over the rubber ring with some pressure.
- 4 Check whether the adapter is fixed and rotates with the front segment.

Jet tube, attach side adapters



Side adapters with the small noses on the handle and latch downwards

- 1 Place the side adapter so that the two small noses sit on the handle.
- 2 Push the adapter down until it clicks tight.
- 3 Check whether the adapter is not wobbling and can later accommodate the right controller cleanly.

Jet tube, install controller



Insert left and right controllers into the jet tube adapters and screw them in

- 1 Start with the right controller on the side adapter. Observe the indicated direction, insert controllers loosely and then rotate. It tightens itself.
- 2 Place the left controller in the front adapter, check alignment and also turn it in.
- 3 At the end, both controllers must rotate with the respective jet tube parts.
- 4 Thus, in the application, the amount of water and the form of the jet can be understood via the real movement, as far as the respective module supports this.

Jet tube, pre-use check



Ready-equipped jet tube with both used controllers

- Controllers are stuck, but not under tension
- Controller tops are visible for tracking cameras
- Test jet tube open and close
- Briefly move beam shape and rotatable segments
- In the application, select the real jet tube
- open the beam tube and rotate towards the glasses until both controllers are visible

Click and teleport on the jet tube

When the controllers are inserted in the branch, the controller clicks and teleports via the upper button. Depending on the grip position, this button can be pressed with handballs or thumb. This necessarily actively show, because otherwise many users do not expect an interaction possibility.

Fire extinguishers, scope of delivery and preparation



Fire extinguisher with nozzle adapter, ring adapter, button adapter and both controllers

- Stable fire extinguishers
- Provide adapters: nozzle adapters, ring adapters and button adapters
- Pay attention to the inscription of the brackets, left and right are marked
- Provide right and left controllers
- Hold the controller so that the grip button remains accessible with the middle finger
- Only use controllers when all adapters are clean
- Click nozzle from the holder so that the nozzle adapter can be plugged on more easily

Adapters are wear parts

The 3D printed adapters may give way in case of doubt before controllers or practice extinguishers are damaged. If an adapter is broken, warped or loose, stop using and contact support.

Fire extinguishers, nozzle adapters attached



Plug nozzle adapter for the right controller onto the nozzle

- 1 Take the adapter for the right controller.
- 2 Plug the adapter onto the nozzle at the front. It holds through friction, so some pressure is normal.
- 3 Do not work with excessive force. The adapter should sit firmly, but not damage the nozzle.
- 4 Then click the nozzle back into the holder so that it is out of the way.

Fire extinguishers, ring adapters click on top



Align ring adapter at a 90 degree angle and click on the metal ring at the top

- 1 Take the ring adapter for the left controller.
- 2 Den Ring im 90 Grad Winkel ausrichten.
- 3 Put the small holes of the adapter on the two metal nupsies.
- 4 Adapter click on the metal ring and check firm seat.

Fire extinguisher, button adapter on the lever



Align button adapter with notch on screw or rivet and click on the lever

- 1 Den kleinen Knopfadapter nehmen.
- 2 Align the notch in the adapter on the screw or rivet on the lever.
- 3 Den Adapter auf den Hebel klicken, bis er fest sitzt.
- 4 The adapter must move with the lever and press the appropriate controller button reliably later.

Current version

This adapter is no longer glued on. It is clicked on the lever. References to double-sided tape from old videos or old slides are obsolete here.

Fire extinguishers and controllers



Insert right controller in the nozzle adapter and left controller in the ring adapter

- 1 Start with the right controller. It comes into the nozzle adapter at the front, the holder is marked accordingly.
- 2 Insert the right controller so that the grip button points upwards and remains reachable.
- 3 Insert the left controller at the top of the ring adapter, also with the button up.
- 4 The button adapter on the lever should actuate the grip button of the left controller. If this looks like this and nothing wobbles, the fire extinguisher is ready for use in VR.

Fire extinguishers, pre-use check



Finished fire extinguisher with inserted controllers

- Nozzle adapter sits firmly on the nozzle
- Ring adapter sits at a 90 degree angle and is latched on the metal points
- Button adapter sits on the lever and moves with
- right controller in the front of the nozzle
- linker Controller steckt oben im Ringadapter
- kein Controller sitzt verkantet
- the lever does not press the controller permanently, unless this is desired for the current state
- in the fire extinguisher application make short spray test

Fire extinguishers, start and operate training

Reference video for customers: Fire extinguisher overview, open video.



Fire extinguisher training, selecting fire source

- in the application menu with the right controller fire safety assistant and then select fire extinguisher training
- Select the fire source, then select the appropriate fire extinguisher type
- Point to buttons with the right controller and confirm with the trigger
- B-Knopf opens the main menu, there are system functions and fire extinguisher settings

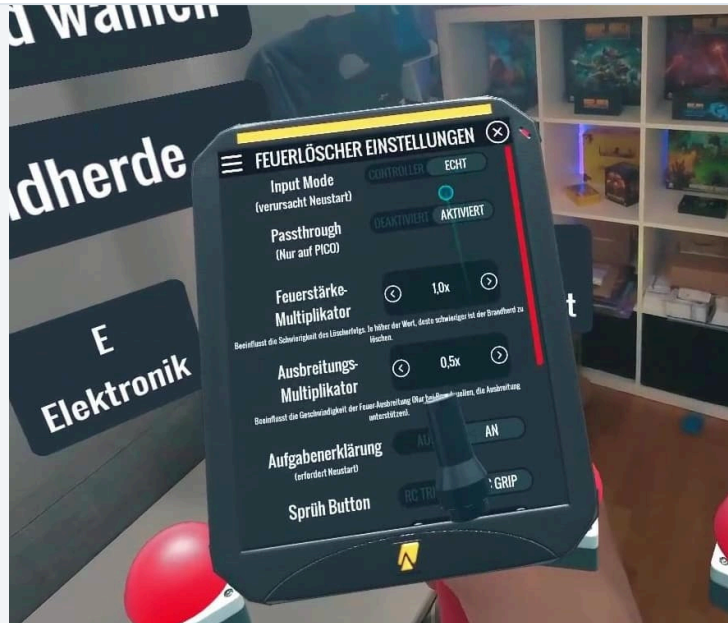


Fire extinguisher training, main menu open via B-Knopf

- Restart training as needed via system and training
- After selection of the fire source, the position can be corrected with the joysticks if the fire is unfavorable



Fire extinguishers, important settings



Fire extinguisher training, fire extinguisher settings

- Real fire extinguisher or just controller: use the real fire extinguisher mode for haptic training.
- Passthrough: Leave real environment visible or switch to a fully virtual environment.
- Fire intensity and spreading: difficulty adjusting extinguishing agent requirements and spreading speed.
- Task statement: Notes in the application on or off, depending on whether the trainer himself explains.
- Spray button: Standard is the left grip button on the fire extinguisher lever, alternatively the right trigger can be used.
- Start and maximum spray buttons: define when the extinguishing process starts and when maximum output is reached.
- Button height: dynamic below eye level is usually useful because buttons remain more accessible for large and small people.
- Time restart by result: determines how long success or failure remains visible before training restarts.
- Task-Panel Behavior: Explanatory text before the fire, dynamic or static. Static is often quieter for demonstrations.

Fire extinguishers, evaluation and exercise variants

- The evaluation shows success or failure after the deletion attempt.
- The right extinguisher must fit the fire class, for example different choice for oil and alcohol than for fat burn.
- Wrong combinations, too short a distance, too long a wait or an empty extinguisher can lead to failure.
- For group operation set the time until the automatic restart appropriately.
- New fire sources and improvement requests can be reported to the support.

CPR

- Puppet and controller separately explain
- Show calibration on torso and head
- Controller an den Handgelenken befestigen
- Explain feedback on depth, frequency and rhythm
- bei Bedarf eigenen Vertiefungstermin anbieten

Planspiel

- Treat as a depression, not as a first module
- Szenario vorab planen
- Define management level, learning objective, location, roles and debriefing questions
- Store and reuse objects in groups
- bei Bedarf gemeinsamen Online Termin zum Szenarioaufbau anbieten
- For beginners, choose simple layers, not directly complex multiple layers with many injured

If a fire is not extinguishable

First check difficulty, flow, extinguishing agent, complete opening of the branch, adapter seat and tracking. If it still seems implausible, record video, describe the situation and give it to the support.

Troubleshooting

Problem	Possible solution
Bild ist unscharf	Headset easily move up or down, adjust seat on the headband, clean lenses.
Double vision or rapid eye strain	Check seat, adjust only if necessary under settings and display, take a break.
Image is frozen or headset does not respond	Press Power button for at least 10 seconds to force a restart.
Headset does not start	Charge battery, check the charger and cable, hold the power button longer.
Tracking jumps or drifts	Better illuminate space, avoid specular surfaces, check front cameras, refurbish boundary.
Virtual floor height is not right	Reset Boundary or Play Area, reconfirm ground height, restart headset in free place.
The controller is not recognized	Turn on the controller, check the battery, restart the headset, reconnect if necessary.
Controller LED blink rot	Change or charge battery, use 1.5 V AA alkaline battery, check polarity.
Controller LED flashes red and blue	Controller is in pairing mode, coupling in the headset complete.
Controller missing, menu still needs to be operated	Head-Control-Mode, point head to menu point and confirm with volume button.
Trigger or click reacts severely	Check if it happens in the main PICO menu or only in Firefighter VR. If system-wide, record suitcase or device number, create WLAN and contact support.
Jet tube hangs crooked or falls virtually from the hand	Opening the beam tube, turning to the glasses, making controllers visible, then the tracking usually retracts.
Fire cannot be extinguished	Check difficulty, flow, foam, extinguishing agent, tracking and full opening. If you suspect error, record video.
Image transfer does not work	Activate headset, check HDMI transmitter and receiver, supply both with power, select the correct HDMI input.
Browser transmission does not work	Headset and laptop must be in the same WLAN, check address, start Screencast.
Updates are not installed	WLAN check, leave headset online for a few minutes, restart application later.
Users feel uncomfortable	Immediately pause, drop headset, sit down, restart later with teleportation or sitting mode.
Battery under 30 to 35 percent	Charge early for events. Low battery can lead to savings mode and glitches.

Continued

Problem	Possible solution
HDMI Image error or unstable transmission	Use the power bank on the HDMI transmitter, check the correct HDMI input, pull off the stick during breaks.
HDMI-Bild steht hochkant	Press the button on the receiver (R) once or several times until the image is in landscape format. The rotation is on the receiver, not in the glasses.
Participant change takes too long	For short event scenarios use standby trick: short press power, drop it, clean it, put on the next person.
Google Maps or online card does not load	Check Internet connection. Local training runs offline, online map data requires WLAN or Hotspot.
Jet tube click or teleport missing	Upper controller button on the used jet tube, depending on the posture with handball or thumb.
Jet tube front adapter does not rotate with	Place notch on the rubber nose and slip the adapter cleanly over the rubber ring below. The front adapter must rotate with the front segment.
Jet tube side adapter wobbles	Align the two little noses on the handle and push the adapter down until it latches.
Jet tube controller does not latch cleanly	Use controllers loosely and turn them in, not just press in with force. Check the orientation of the right and left controller.
Fire extinguisher nozzle adapter sits loose	Clip nozzle, plug nozzle adapters straight on and push them tight with some pressure. The adapter holds by friction.
Fire extinguisher ring adapter sits wrong	Align ring adapters at a 90 degree angle. The small holes have to sit on the two metal nupsies.
Fire extinguisher button adapter sits wrong	Align the notch of the button adapter on the screw or rivet and click on the lever. Do not stick.
Fire extinguisher sprays permanently or not at all	Check button adapter, lever travel and controller position. The lever must not press the controller permanently. In the fire extinguisher menu adjust starting value and maximum value.
Virtual Fire Extinguisher Hangs Wrong	Test nozzle adapter, ring adapter and controller orientation. Then restart the application or stabilize tracking by briefly resting.
Fire extinguisher menu is not found	In the fire extinguisher module press the B-Knopf. Point to fire extinguisher settings with the controller and confirm with the trigger.
Fire source is unfavorable in the room	Move or turn the fireplace after the selection with the joysticks. For correct placement, if possible start where the person should stand later.
Fire extinguisher buttons or explanatory texts are unfavorable	Check button height and Task-Panel behavior in the fire extinguisher settings. For demonstrations, a static panel can look calmer.
Deletion success comes too fast or result disappears too fast	Increase time restart by result so that users and trainers can watch the summary in peace.
Feuer breitet sich zu schnell aus	Reduce firepower and spread in fire extinguisher settings and explain training goal before launch.

Continued

Problem	Possible solution
Fire extinguisher triggers on the wrong controller	Test spray button in the fire extinguisher settings. Standard is the left grip button on the lever, alternatively the right trigger can be used.

Checklists

Before training

- ☐ Headset geladen
- ☐ Controller charged or batteries full
- ☐ All accessories
- ☐ Linsen sauber
- ☐ Face-Shield gereinigt
- ☐ Training area free
- ☐ Reale Sicherheitszone gekennzeichnet (mindestens 3×3 m)
- ☐ Image transmission tested
- ☐ App einmal gestartet
- ☐ Aufgaben vorbereitet

During training

- ☐ a person accompanies the VR use
- ☐ Image transmission is ongoing, if possible
- ☐ kurze klare Anweisungen geben
- ☐ bei Unwohlsein pausieren
- ☐ Offer a break for longer units
- ☐ bei technischen Problemen ruhig neu starten
- ☐ Then ask them about each of them.

After training

- ☐ Close the application
- ☐ Headset reinigen
- ☐ Test lenses
- ☐ Checking Face-Shield
- ☐ Cleaning accessories
- ☐ Headset laden
- ☐ Charge controller or check battery level
- ☐ Put accessories completely in the suitcase
- ☐ Feedback notieren

Event Checklist

Aufbau

- ☐ Training area and audience area separately
- ☐ aktive Person jederzeit betreut
- ☐ There is no sun on the lenses, not even when putting down
- ☐ Screen, beamer or monitor tested
- ☐ HDMI Transmitter supplied via Powerbank
- ☐ long USB-C cable and power supply handy

Betrieb

- ☐ Face-Shield regularly clean and wipe dry
- ☐ Recharge less than 30 to 35 percent battery
- ☐ Standby bei jedem Leerlauf nutzen
- ☐ Use jet tube only at a clear distance
- ☐ Show jump pads only under direct protection
- ☐ Collect photos or feedback for Northdocks

Contact and Support

Firefighter VR

E-Mail: service@firefightervr.de

Telefon: +49 (0) 2173 9996713

Web: <https://firefightervr.de/>

FAQ: <https://firefightervr.de/en/faq.html>

Training modules: <https://firefightervr.de/en/trainingslist.html>

Adresse: Niederstr. 18, D-40789 Monheim am Rhein

YouTube Playlist: https://www.youtube.com/playlist?list=PLUHDIfmthtJMu_aWEyADWwCese3vmtkZL

Fire extinguisher overview: <https://youtu.be/1DNdbUTxNJc>

Bei Supportanfragen hilfreich

- Product and module
- Headset Modell
- kurze Problembeschreibung
- When the problem occurs
- ob ein Neustart versucht wurde
- ob WLAN verbunden ist
- Photos, screenshots or video
- verwendete Streaming Variante

Current manual version

You will always find current information at firefightervr.de. You can open the current version of this manual at firefightervr.de/en/handbuch/ — scan this QR code.



Open current manual online

Fachliches Feedback

Bei technischen Fragen hilft eine kurze, konkrete Beschreibung des Problems.

For events, Northdocks also looks forward to photos or social media contributions, provided they are released internally.

Annex A, Packages and equipment

Package jet tube

- Genuine jet
- Opening, closing and beam form
- Extinguishing attacks such as forest fire, internal attack and gas tank fire
- Suitable for handling and tactical approach on troop level

Package fire extinguishers

- True training fire extinguishers
- verschiedene Brandherde
- Selection of the appropriate extinguishing agent
- Suitable for fire protection, instruction and action days

Paket CPR

- CPR Puppe
- Detection of pressure depth and rhythm
- Controller an den Handgelenken
- High score and direct feedback

The system runs self-sufficiently on the headset, does not require a PC or a server, can be used offline and receives updates automatically when there is an Internet connection.

Annex B, Training Overview

This overview helps with consulting, onboarding and training planning. The information is used as guidance.

Training	Paket	Dauer	Zielgruppe
Firesaber Training	Basis	ca. 5 bis 10 Minuten	Youth firefighting, recruiting, public relations
Erasing attack training	Jet tube	ca. 10 bis 15 Minuten	AGT, squad training, emergency forces
Indoor fire training	Jet tube, optional fire extinguisher	ca. 10 bis 15 Minuten	Breathing apparatus wearer, squad leader, squadman
Airport training	Basis	ca. 15 bis 20 Minuten	Flughafenfeuerwehr, Werkfeuerwehr
Flashover Szenario	Jet tube	ca. 5 bis 10 Minuten	Breathing equipment carrier, instructor, squad leader
Fire extinguisher training	Fire extinguishers	ca. 5 bis 10 Minuten pro Szenario	fire safety helper module, Mitarbeiter, Schulen, Feuerwehr
Wildfire training	Jet tube	ca. 10 bis 15 Minuten	Emergency services, citizens, public relations, children and young people
Gas tank fire training	Jet tube	ca. 10 bis 15 Minuten	Emergency forces, ABC instructors, group leaders
Centrifugal pump training	Basis	ca. 10 bis 20 Minuten	Maschinisten, Grundausbildung, Ausbilder
First aid training	Basis	ca. 10 bis 15 Minuten	First responders, first responders, paramedics
Resuscitation training, CPR	CPR	ca. 5 bis 10 Minuten	Ersthelfer, Rettungsdienst, Feuerwehr, alle Altersgruppen
Sprinkler maintenance training	Basis	ca. 15 bis 20 Minuten	Brandschutzbeauftragte, Facility Manager, Feuerwehr
Emergency pneumatics training	Basis	ca. 10 bis 15 Minuten	Werkfeuerwehr, Industriebetriebe, technische Rettung
Jump cushion training	Basis	ca. 10 bis 15 Minuten	Forces, train drivers, instructors
Accident scene safety training	Basis	ca. 10 bis 15 Minuten	Forces, first responders, squad leaders
Electronics fire training	Fire extinguishers	ca. 5 bis 10 Minuten	IT enterprises, fire safety assistants, electrical specialists
Office fire training	Fire extinguisher, optional jet tube	ca. 5 bis 10 Minuten	Fire safety assistants, office workers, facility management

Continued

Training	Paket	Dauer	Zielgruppe
Reconnaissance training	Basis	ca. 10 bis 20 Minuten	Unit, group, train driver
Load fire training	Jet tube	ca. 10 bis 15 Minuten	Forces, squad leaders, instructors
Oil flat fire training	Jet tube	ca. 10 bis 15 Minuten	Werkfeuerwehr, Berufsfeuerwehr, Industriebetriebe
Planspiel	Basis	frei konfigurierbar	Unit, train, convoy, staff
Turntable ladder training	Basis	ca. 10 bis 20 Minuten	Machinists, emergency forces
Training tracks	Basis	ca. 5 bis 15 Minuten	Breathing equipment wearer, basic training

Modulkarten



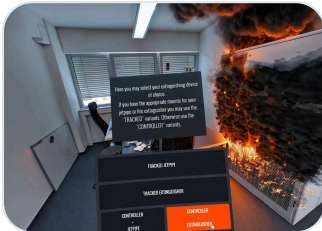
Firesaber Training

Basis ca. 5 bis 10 Minuten Youth firefighting, recruiting, public relations

Playful fire protection course with high score hunting. Participants hit and extinguish burning objects with targeted movements.

What is trained: Responsiveness, coordination, playful access to fire protection, high score competition and event motivation.

Note for Trainers: Ideal for recruiting, open days and youth firefighting. Good as a short, activating start with a quick experience of success.



Erasing attack training

Jet tube ca. 10 bis 15 Minuten AGT, squad training, emergency forces

Training for the coordinated setup and execution of a deletion attack in VR.

What is trained: hose laying, water extraction, jet pipe guidance, communication in the squad and tactical approach.

Note for Trainers: Good as a bridge between jet pipe handling and tactical training. Before shortly set roles, goal and expected flow.



Indoor fire training

Jet tube, optional fire extinguisher ca. 10 bis 15 Minuten Breathing apparatus wearer, squad leader, squadman

Realistic housing fire scenario for internal attack under controlled VR conditions.

What is trained: Tactical approach in the squad, door check, controlled approach in the fire room, orientation in smoke, jet pipe guidance, opening, closing and jet shape.

Note for Trainers: Use as a supplement to practical training. Especially suitable for discussing procedure, communication and jet tube handling in advance.



Airport training

Basis ca. 15 bis 20 Minuten Flughafenfeuerwehr, Werkfeuerwehr

Specialised training for aircraft and airport apron operations.

What is trained: Approaching a burning aircraft, cargo hatches and emergency exits, foam and powder, orientation on the apron, evacuation scenarios, coordination with VR and AR support.

Note for Trainers: Special module for plant and airport fire departments. For general groups, rather briefly introduce, for specialist groups use in more detail.



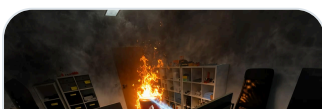
Flashover Szenario

Jet tube ca. 5 bis 10 Minuten Breathing equipment carrier, instructor, squad leader

VR Experience of flue gas sparking, from initial warning signals to complete sparking.

What is trained: Signs of a Flashovers, smoke gas observation, temperature evaluation via visual cues, retreat, self-protection, squad coordination, time-critical jet tube operation.

Note for Trainers: Very suitable to make rarely real trainable danger situations clear. Say clearly beforehand that it is a compact hazard scenario.



Fire extinguisher training

Fire extinguishers ca. 5 bis 10 Minuten pro Szenario fire safety helper module, Mitarbeiter, Schulen, Feuerwehr

Training for fire safety helpers, school children, employees, fire departments, fire safety

Annex C, Planspiel scenario structure

The Planspiel is very flexible. For practical use, each scenario should have a clear goal and appropriate complexity.

Item	Description
Scenario title	Short, understandable name, for example traffic accident on a country road or apartment fire multi-family house.
Appropriate guidance	For example, squad leader, group leader, train leader or staff.
Learning objective	What should be better understood after the scenario?
Initial situation	Short description of the situation with location, time, weather, objects involved and known dangers.
Roles	Who is responsible for mission management, exploration, section management or observation?
Decision points	Which decisions should be made and discussed consciously?
Complexity	Beginners do not overwhelm with too many injured, floors, vehicles and special situations.
Debrief	What two to three questions are asked after the run?

Szenario Bibliothek

Scenarios can be saved as groups, exported and later imported again. Shared online appointments with instructors are well suited to gradually build up a small library.

Gemeinsamer Szenarioaufbau

If your own operational situations are to be prepared, a joint online appointment can be useful. The instructor provides the technical concept, Northdocks or a experienced person builds the situation in VR. The conversation can then result in a short scenario documentation.

Empfohlene Dokumentation pro Szenario

Title, management level, starting point, learning objective, required objects, expected decisions, typical mistakes, debriefing questions and export file of the object group.

Annex D, GodView and own 3D data

GodView and Planspiel can load their own 3D tilesets, for example photogrammetric scans of an application area.

- | | |
|--|--|
| 1 Load ZIP file with the 3D record to the PC. | 2 Headset via USB-C connect to the PC. |
| 3 ZIP Datei in den Download Ordner des Headsets kopieren. | 4 ZIP Datei auf dem Headset entpacken. |
| 5 Add a new tileset in GodView via Dataset and select the tileset.json. | 6 In the Planspiel change environment select the tileset. |

In GodView, the data set is rendered in higher resolution. In Planspiel, the quality can be reduced so that enough performance remains available for placeable objects.

Annex E, links

For current content, FAQs and training pages, the website is the central source.

Central links

Web: <https://firefightervr.de/en/>

FAQ: <https://firefightervr.de/en/faq.html>

Training modules: <https://firefightervr.de/en/trainingslist.html>

YouTube Playlist: https://www.youtube.com/playlist?list=PLUHDIfmthtJMu_aWEyADWwCese3vmtkZL

Support: service@firefightervr.de

Handbook online: <https://firefightervr.de/en/handbuch/>

Jet tube device: <https://youtu.be/BdzFXkyGvnc>

Fire extinguisher overview: <https://youtu.be/1DNdbUTxNJc>

Current information

Current information about Firefighter VR can always be found on firefightervr.de. The current version of this manual is accessible via the QR Code in the Contact and Support section.