Huddle Hub One / Huddle Hub One+

User Guide

Product version 2.3 - Manual version 1

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1 Introduction

1.1 Huddle Hub

Huddle Hub™ product family is the answer to the needs of modern teamwork, which is increasingly based on content presentation and video-conference. Thanks to Huddle Hub, these activities can be performed everywhere in your organization, in traditional meeting or huddle rooms, but also in offices, open-space areas, or even lounges. Every place in your company / organization - whether AV equipped or not - can be used as a huddle room:

- Taking advantage of existing large displays and webcams, but also using only individual devices. Or combining the two.
- With no cables for the TV, and no cables for the webcam.
- Running up to four concurrent sessions on a single Huddle Hub unit.
- Experiencing a smooth integration between Huddle Hub and your favorite video-conference software.

The Huddle Hub solution is made of two components:

- The Huddle Hub unit, currently available in two versions: Huddle Hub One (**HHO**) and Huddle Hub One+ (**HHO+**);
- The Huddle Hub App (**HHApp** or simply **App**), a companion software available for Windows, MacOS, iOS and Android devices. Though HHApp is the best way to unleash all the power of the Huddle Hub solution, presentations can also be received on any web browser without the need of installing any app.

The two models HHO and HHO+ are identical except for network connectivity: both models allow **wired connection**, but Huddle Hub One+ also embeds a **wireless network adapter** for Wi-Fi connectivity, thus supporting a **dual-network configuration**.

Given that HHO+ includes all the functionality of HHO, when this guide refers to HHO it means HHO or HHO+. HHO+ specific features will be highlighted with the "HHO+ only" marker.

1.2 Documentation

HRT provides a thorough and exhaustive documentation, consisting of the following manuals:

- **Quick Start Guide**: a very short guide that contains the essential steps to start using HHO and HHApp. Available in the box of the product and in the support section of HRT website (www.hrt.website).
- **Specification, Safety and Conformity**: describes all the technical specifications, the safety precautions and the conformity of HHO to national/internationals rules and certification requirements. Available in the box of the product and in the support section of HRT website (www.hrt.website).
- **User Guide**: shows the user how to use and get the most from Huddle Hub App. Available in the

support section of HRT website (www.hrt.website).

- Installation Guide: from unpacking to deployment, a short guide to install your HHO unit and choose among different network configurations. Available in the support section of HRT website (www.hrt.website).
- Configuration Guide: directed to IT Managers or IT staff members, it explains how to configure HHO to better suit the company needs. Available in the support section of HRT website (www.hrt.website).
- Network Security Guide: contains recommendations for the IT Manager or Network Security Manager, aimed at designing and implementing a secure deployment of HHO units in the organization's infrastructure. Available in the support section of HRT website (www.hrt.website).
- FAQ: the support section of HRT website (www.hrt.website) contains also a dynamically updated knowledge base with the answer to the Frequently Asked Questions.

Before consulting our documentation, please check that the product version printed on the cover page of your manual matches your HHO and HHApp versions, and that the manual version is the latest one. Manual numbering follows the following scheme:

```
<Manual name> <Product version> - <Manual version> . pdf
```

For example, "User Guide 2.3-1.pdf" means that this version of the User Guide covers all product versions staring with "2.3" (e.g. 2.3.1, 2.3.5 etc) and it's version 1 of the manual itself.

HRT supports only the latest release of its software, which is always available free of charge. Users and IT Managers are invited to keep their HHApp and HHO units up to date, and to download the most recent version the manuals from the support section of HRT website.

2 Understanding Huddle Hub

2.1 Rooms, Sessions and Roles

Rooms and Sessions

For our purposes, a **session** is the sitting together of a group of people, with the intent of either making or assisting to a presentation, or to perform a video-conference.

A session happens in a **room**, which usually corresponds to a physical place where the participants meet. However, HHO extends the concept of room to the group of participants that join the same session, wherever they are.

HHO supports **up to 4 rooms per unit**, each one able to host one fully independent session. Each room is identified by a name, that can be set to match a specific place (e.g. "Main meeting room", "1st floor huddle room" etc.) or a group of users it's reserved for (e.g. "Marketing dept.", "IT Demo", etc.) or any other criteria that meets your needs.

A session starts when the first participant connects to a room, and ends when the last participant closes his connection.

The following example portraits the situation of a company that has two HHO units, each one with four enabled rooms:

- HHO Ground Floor
  - Lobby
  - Huddle room 1
  - Huddle room 2
  - Admin & Finance
- HHO First Floor
  - Board room
  - CEO's virtual huddle room
  - Sales department
  - Production department

Each room can host **up to 150 participants per session** (depending on its configuration and on bandwidth availability).

Hub room and Virtual rooms

The place where the HHO unit is physically present and installed is called **hub room**, while the other three rooms are called **virtual rooms**.The existence of the hub room is optional, because you can decide to install HHO in your company data center and not to connect to any device except the

company LAN. In this case all the four rooms will be "virtual".

Passcode

Sessions can be protected with a passcode, which ensures the privacy of your meeting. The passcode is a 4 digits random number, generated when the session starts, that is visible on the TV screen or in the toolbar of the participant that started the session or in the one of the participants that already joined it. Passcode protection can be disabled.

Roles

During a session, we identify the following roles:

- Participant: anyone who is connected to the session.
- Presenter: any participant who is currently sharing his/her screen with the other participants.
- Viewer: any participant who is receiving the presenters' screen.
- Host: we call "host" the presenter that starts a video-conference using the Huddle Hub Virtual Driver as camera, thus sharing the VC software screen with the other participants.
- Active Speaker: during a video-conference based on the Multicam Feed, and with Multicam layout set to *Active speaker*, the participants whose camera stream is in the main frame of the layout.

2.2 TV, Wireless Webcam and Multicam

TV Sets and Projectors

In a typical scenario, your HHO unit will be installed in a meeting room, huddle room or another shared space, and will be connected to a large TV set with an HDMI cable. We've defined this room as hub room, while the remaining HHO rooms are called virtual rooms. What happens in those virtual rooms? How do the participants see the presentation?

There are a few possible options:

- Individual devices: any participant can receive the presentation on his/her own device, either a PC, a tablet or a smartphone.
- TV set: Smart TVs can receive the presentation through a web browser. Android TVs can receive the presentation like any other Android device can. They just need to have the Huddle Hub Android TV app installed. Other TVs need and Android dongle or set-top box attached to one of their HDMI ports.
- Mixed mode: some participants look at the presentation on their individual device, and the others on the TV. This is always possible in the hub room

Welcome screen

In case your HHO unit is connected to a display through its TV port, when no session is in progress it will show a *Welcome Screen*, which contains instructions about downloading the Huddle Hub App and about accessing the session. This Welcome Screen can be customized.

Wireless Webcam

HHO can also connect a USB Webcam. This is possible only in the hub room, because it has to be plugged to the unit.The HHO unit will make this webcam available to the HHApp clients connected to the hub room, through a virtual camera driver, with no need of any cable.

Multicam

When a room webcam is not available, or when you decide not to use it, you can enable the feature called Multicam, which allows the participants of a video-conference to use the cameras of their own devices: their streams get captured and combined into a single one, to send to the video-conference software of your choice, thus realizing a true multi-camera video-conference system. Multicam is available only in the hub room and is alternative to Wireless Webcam.

2.3 Reaching a Room

Whether you want to present your screen to the other participants, or to receive their presentation on your device, you have to connect to a room. To achieve this, you have to:

1. Connect your device to the same network HHO is connected to.
2. Select the room you want to use for your presentation.

Network connection

The network to use can be either the company LAN or HHO+ embedded access point (*HHO+ only*).

LAN connection

The task of installing and configuring HHO to make it visible to all users on the LAN is your Network Administrator's responsibility. Under this configuration, your device will be able to access HHO through the standard network configurations you already use to access your company LAN, and when you start your HHApp, you will see a list of all the available rooms associated with the connected HHO units.

Warning: *Although HHO and devices are properly configured to access the same LAN, in complex network configurations you may experience problem in reaching the active rooms. If this happens, contact your network administrator or consult the Configuration Guide.*

Embedded Access Point connection (HHO+ only)

You can directly connect to your HHO+ unit, provided that you are in the range of its embedded Wi-Fi access point and that it's been configured to allow such a connection. To do so, on your device select the Wi-Fi name (SSID) of the HHO+ you want to connect to. By default, the SSID is "huddlehub" and the password is "huddlehub", but they may have been changed (recommended!). Ask your Network Administrator for the HHO+ Wi-Fi credentials .

Using this approach, you can reach only the rooms that belong to the HHO+ unit you are directly connected to.

Mixed connection (HHO+ only)

Both the methods described above can be used at the same time, and any session may have participants connected either ways.

Discovering the room to connect to

Automatic Discovery Service

If both HHO and your device have been properly configured, at its start HHApp will show the list of the available rooms. This list is prepared and presented to you through a network discovery service. When the service is enabled (and allowed by local network configurations), HHApp can automatically search for HHO rooms on the network.

Manual Search

In some network configurations, the automatic discovery service may not be able to reach all the HHO units and show all their available rooms. For these cases, HHApp offer a *Find Rooms* function, that you can use to reach the rooms through the IP address of the HHO unit that hosts them (see next chapter about finding the IP address of a HHO unit).

2.4 Finding the IP address of a HHO unit

There are cases when you need to know the IP address your HHO unit:

- to download HHApp from the unit;
- to configure HHO unit with its Web Console;
- to attend a session using your web browser;
- to connect to a room that cannot be reached through the *discovery service*.

When HHO is connected to the company LAN, its IP address is either dynamically assigned by the DHCP server of the network or statically assigned during its configuration.

- If the unit is connected to a TV or a monitor, and no presentation is in progress, you can read its IP

address on the welcome screen. HHO+ units may have two IP addresses: one for the wired connection and one for their embedded Wi-Fi network adapter.

- If other participants already entered that room, you can ask them to read the IP address they are connected to (⋮ > Settings > Room info).
- If none of the previous methods is possible, you have to contact your Network Administrator to get the IP address of the HHO unit you want to connect to.

2.5 Performances

HHO is capable of amazing performances. However, what you are actually able to do with it depends not only on the unit itself, but also on its configuration and on the IT infrastructure it's inserted into, and on the performances of the computer and devices HHApp is installed on:

- Up to 4 rooms per unit: this feature is always available.
- Up to 150 participants per room, totaling 600 participants per unit: the actual maximum number of participants depends on Huddle Hub room configuration and on the available bandwidth of your network, in particular on those of the involved access points: type, available channels and frequencies.
- Up to 6 concurrent presentations on the same TV screen. This is possible only in the hub room and the actual maximum number of concurrent presentations depends on the Huddle Hub room configuration .
- Multicam Feed: it allows up to 4 devices to combine their cameras into a single video stream, to be sent to any video-conference software through the Huddle Hub virtual driver. This feature is available only when enabled in HHO configuration. Performances are strictly dependent on the performances of the computer that is running the video-conference software and on those of the devices whose camera stream is being captured.

3 Attending a session with the Desktop App (Windows and MacOS)

3.1 Installation

3.1.1 Minimum requirements

Windows App and Portable App

OS	MS Windows® 7 (with .Net framework 4.5) or higher
CPU	Intel Core i5 or faster processor
Wi-Fi	For Presentation: 802.11n 2.4 GHz wireless network adapter For Presentation + Multicam: 802.11ac 5 GHz wireless network adapter

MacOS App and Portable App

OS	MacOS® 10.11 or higher
CPU	Intel Core i5 or faster processor
Wi-Fi	For Presentation: 802.11n 2.4 GHz wireless network adapter For Presentation + Multicam: 802.11ac 5 GHz wireless network adapter

3.1.2 Installing the Desktop App

Downloading

To participate in a Huddle Hub session with a PC, you need the Huddle Hub App or the Portable Huddle Hub App.

The HHApp installer requires you have administration rights for your PC. If you don't have credentials with administrator rights, or if you prefer not to install HHApp at all, you can use the Portable Huddle Hub App, that can be executed directly, also from an external storage device such as a USB dongle.

For both version you have two download options:

1. *From HRT's Website*

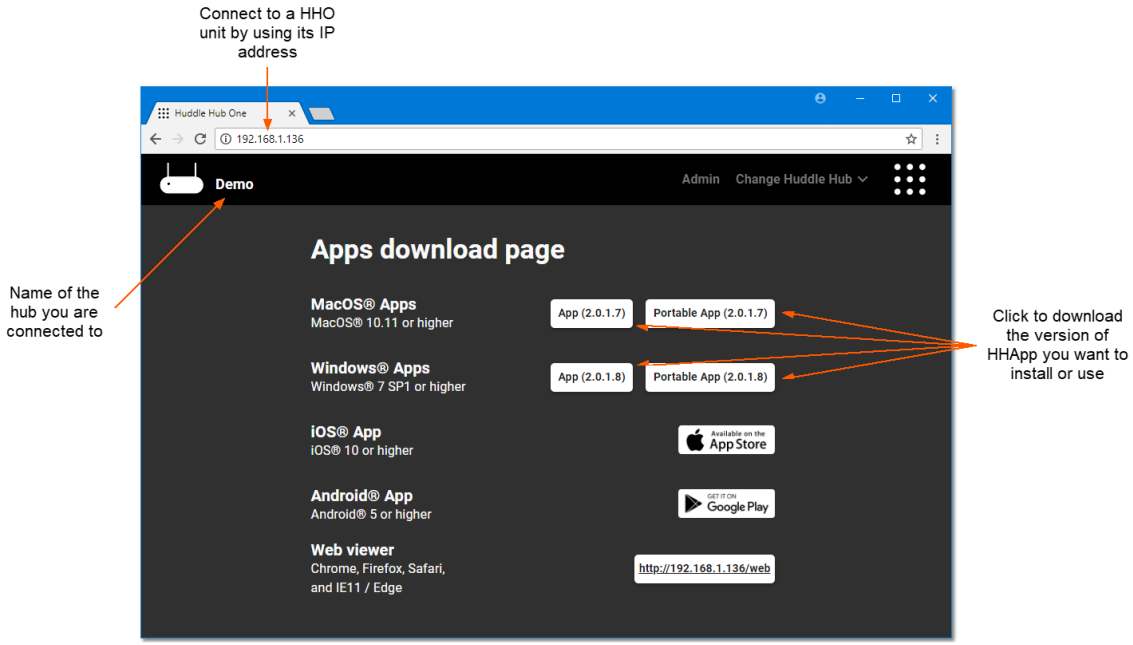
They are available for download at the following address:

https://www.hrt.website/app/

Alternatively, you can reach the download page by scanning the following QR code:

2. *From your Huddle Hub One unit*

Get the IP address of your HHO unit (see Finding the IP address of a HHO unit 9), type it in the address bar of your browser and press Enter: you will see the *Apps download page*, where you can download the version of HHApp you need for your PC.



Installing

Once you have downloaded the installer file, double click it to start the installation process. HHApp will be installed in your default applications folder.

Note for MacOS users: during the installation, you will be prompted to perform Keyboard Shortcuts Enabling in the "Privacy" section of the "Security and Privacy" System Preferences.

The Portable HHApp requires no installation and has all the features of the standard HHApp, but it doesn't support the Wireless Webcam, because that feature requires the installation of a virtual webcam driver.

The Portable HHApp can also be copied on a USB memory stick (with a minimum free capacity of 50MB) and launched from it.

3.1.3 Updating the Desktop App

If the option *Check for updates at startup* is enabled (⁝ > Settings > Update), HHApp will check for an updated version at startup. In that case, the *Updates window* will open, showing the availability of a new version and offering to download it. When downloaded, you will have to launch the installer of the app.

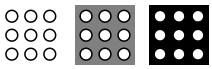
If the option *Check for updates at startup* is disabled, you can manually check for new versions in the Update tab of the *Settings window* (⁝ > Settings > Update): click the **Check for updates** button to verify if a new version exists, and then click **Download** to download it. When downloaded, you will have to launch the installer of the app.

3.2 Starting or Joining a Session

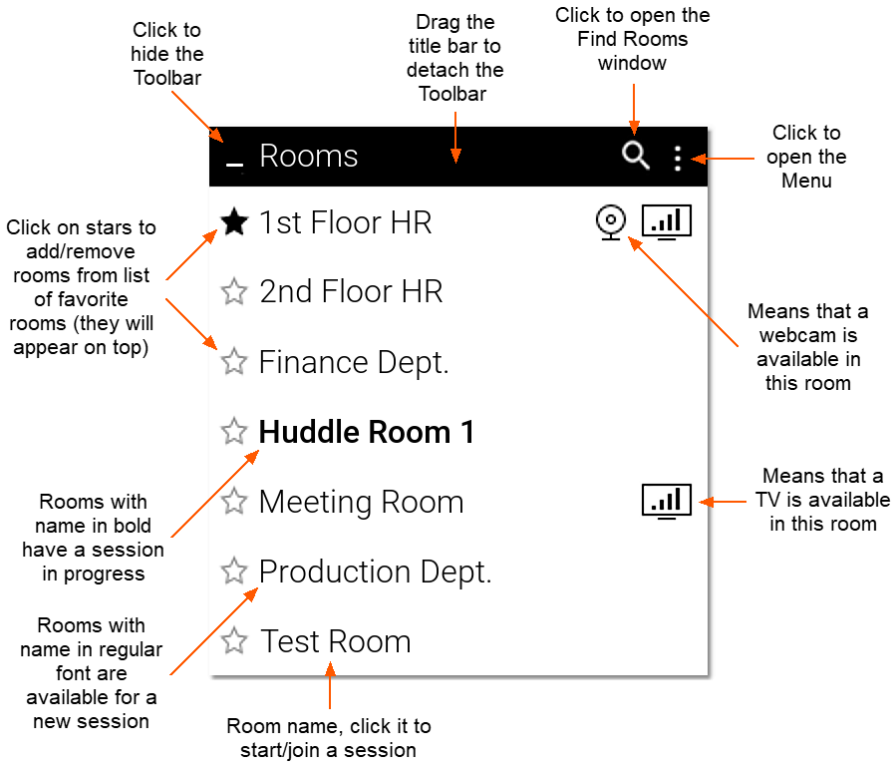
To start or join a session, you must have HHApp installed and running. Unless you changed your default setup, HHApp is configured to be started at boot and should be ready for you to use. If this is not the case, you can start it from the icon you can find on your desktop or from your default applications folder, according to your installation preferences.

The actual appearance of HHApp icon depends on your OS and on your screen settings, but it will be similar to the following:

When running, you can find HHApp in the Tray Area (Windows systems) or in the Status Menu (MacOS systems), identified by HRT's nine-dots icon. Here is how it appears on different backgrounds:



After clicking the HHApp icon, a *Toolbar* similar to the following appears:

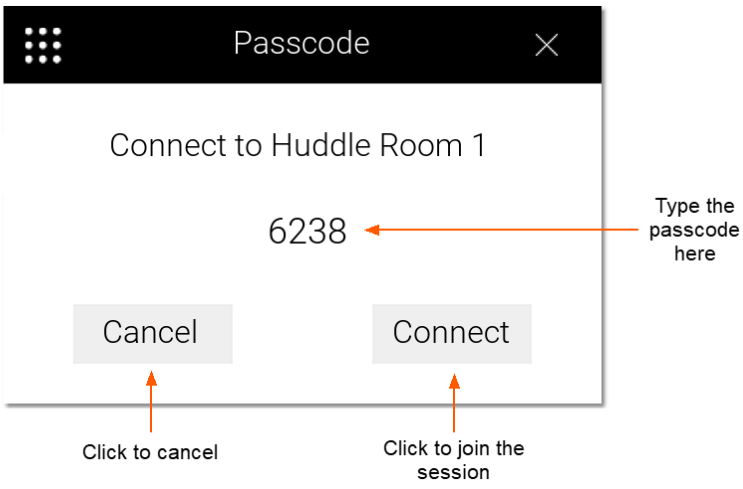


It lists the available rooms, together with icons that inform you about the availability of a TV screen or of a webcam. By clicking on the stars left of the room names, you can add or remove any room from your **favorite list** (favorite rooms show on top of the list).

If one or more rooms don't appear in the list (this could depend on your LAN configuration), or if you have a long list of rooms and you want to search one by its name, you can click the magnifier in the top-left corner of the *Toolbar* and open the Find Rooms 23 window.

You can now **start a new session** by simply clicking on an available room in the list. Rooms whose name appears in bold, have a session in progress, and if you click on them you **join that session**.

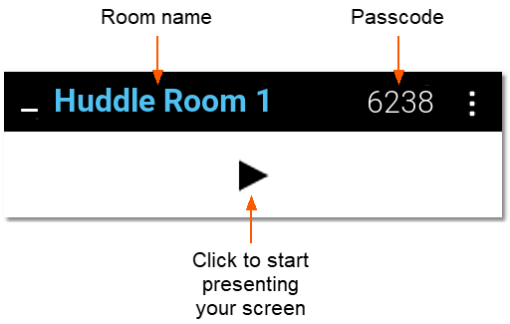
When joining a **passcode-protected session** started by someone else, you are required to enter the passcode:



After you started/joined a session, the nine-dots icon in the tray area will turn blue:

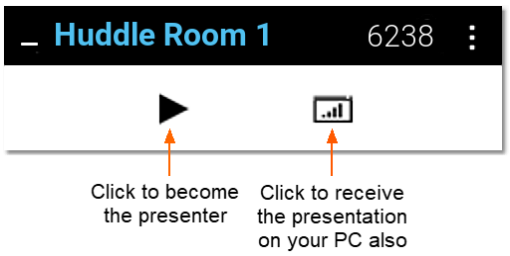
3.3 Sending and Receiving a Presentation

When you start a session, the *Toolbar* changes like in the following image:

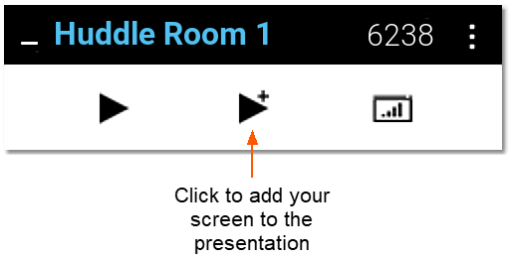


The **passcode** appears only if the room has been configured to be passcode-protected. In this case, you have to tell the passcode to the other participants in order to allow them to join your same session.

When some other participant is presenting his/her screen, the *Toolbar* offers you the possibility to **become the presenter** - replacing the current one - or to **receive the presentation on your PC** also:



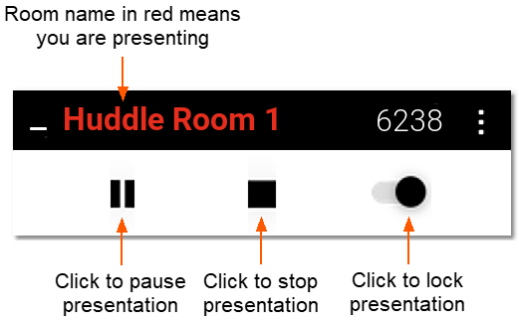
Finally, **if multi-presentation is enabled** (you are in the hub room and a TV is plugged to the HHO unit), a third icon allows you to **add your screen to the presentation**, without replacing the current presenter (up to four simultaneous screens):



Presenting your screen

While you're presenting your screen, the nine-dots icon in the tray area turns red:

and the *Toolbar* changes again to offer you new options:

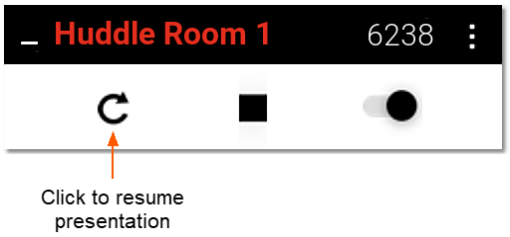


You can now:

- **pause the presentation**: participants will see the last snapshot of your screen before you paused it;
- **stop the presentation**: you will not be sharing your screen anymore;
- **lock the presentation**: no other participant will be able to present his/her screen, until you unlock the presentation again.

During a presentation, you will likely wish to **hide the Toolbar** by clicking on the button in its upper left corner. To get the *Toolbar* visible again, you have to click on the nin-dots icon in your tray area again.

When a presentation has been paused, you can **resume** it anytime with just another click:



Receiving the presentation on your device

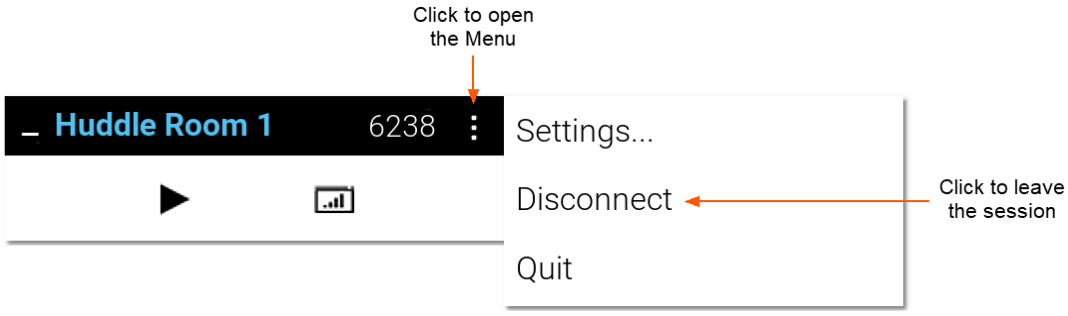
When you click the button to receive the presentation on your device, the *Presentation* window opens. Whether this window appears maximized or not depends on your settings (⋮ > **Settings** > **Presentation**). Inside the *Presentation* window you can:

- press **Esc** if you want to restore the maximized presentation window to its previous size;
- **close** the window not to receive the presenter's screen anymore;
- **right-click to select which screen you want to receive**, when a multi-presentation is in progress.

***Warning**: while presenting, do not change the resolution of your screen. If you need to, stop the presentation, change the resolution, and then restart the presentation again.*

3.4 Leaving a Session

To leave the current session, click on the three-dots button to open the *Menu*, then select the **Disconnect** item:



If you are the Presenter, HHApp asks whether you want to **leave the session** or **end the session** for all the participants.

If you are the only remaining participant of the session, Huddle Hub automatically closes the session and makes the room available again for new sessions.

When you leave a session, HHApp will not close itself, remaining available in your Tray Area.

3.5 Using Huddle Hub in video-conferences

When sessions involve people located remotely, Huddle Hub can play an effective role in supporting the teamwork and maximize the participant's experience.

The Huddle Hub solution integrates perfectly with most video-conference software, doesn't force you to adopt any particular tool and allows you to use the program you are familiar with, or that better suits your needs.

When a participant of a session starts a video call on his PC/device, he can simply **start presenting to make the remote participants visible on the TV screen or on the other participants' screens**, if they're receiving the presentation.

In the next chapters you will learn how to integrate the room webcam in the video-conference, and how to get an even more pleasant and profitable experience through the unique Multicam feature. It's more effective, natural, and comfortable, because participants are not forced to shrink to one side of the table to get framed by a webcam, do not appear too small like when a wide-angle camera is being used, and are not required to continuously adjust a PTZ camera with its remote control.

3.5.1 Wireless Webcam

The Wireless Webcam feature of HHO allow you to use a webcam without having to physically plug it to your PC.

This capability is available provided that your setup meets the following requirements:

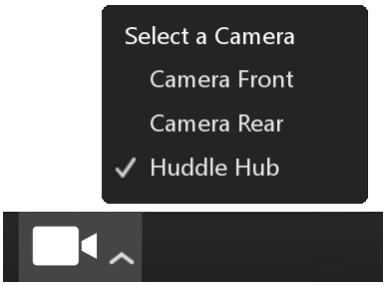
- You are in the **hub room**, the place where your HHO unit is actually installed.
- There is **compatible USB webcam plugged to the HHO unit**.

- The **webcam has not been disabled** (see the Configuration Manual).
- You are using the **installed version of HHApp**. The Portable HHApp does not install the virtual camera driver needed to support this feature.

Connecting to the webcam is as easy as:

1. Launch your video-conference software.
2. Open its settings window and select the camera named "Huddle Hub".

The following image shows a generic, but typical, video camera selection window (your actual video source selection window will look differently):

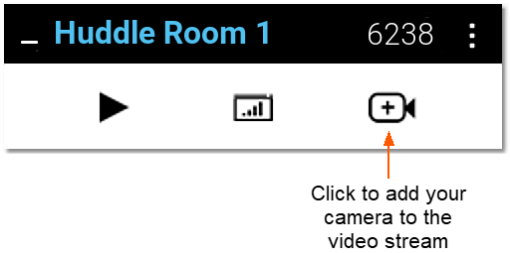


Now your VC software receives the video stream from the webcam connected to the HHO unit.

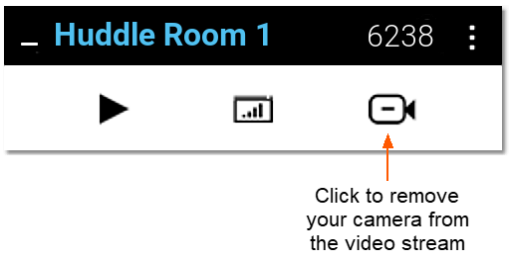
3.5.2 Multicam

HHO offers Multicam, the possibility to combine the video stream of a standard USB webcam with streams captured from up to 6 participants' devices, thus creating a true multi-camera video-conference system.

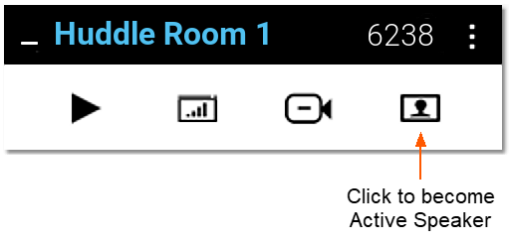
When the Presenter connects to the Wireless Webcam virtual driver to start a video-conference, the *Toolbar* of all connected participants changes as follows:



As you see, you can **include your device camera** into the Multicam with just one click. Similarly, you can **remove your device camera** from the output stream at anytime:

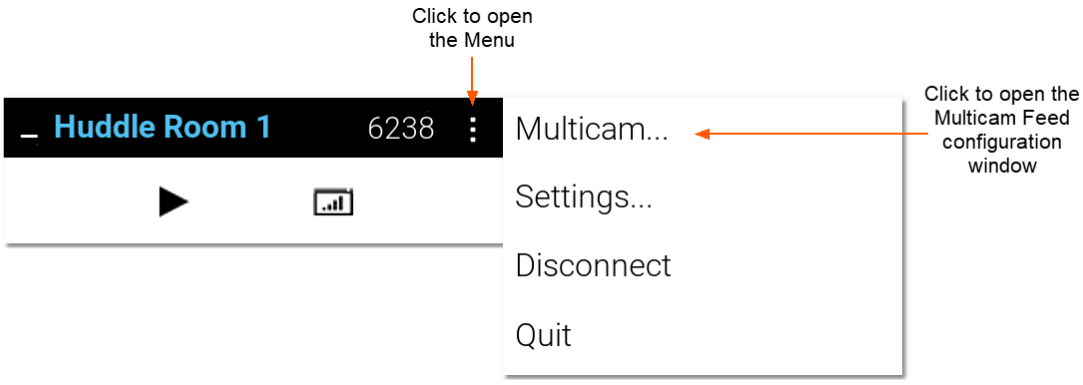


If the Multicam layout is set to *Active speaker* (see next chapter), you have the option to **become the Active Speaker**, that is the participant whose camera stream appears in the main frame of the layout:

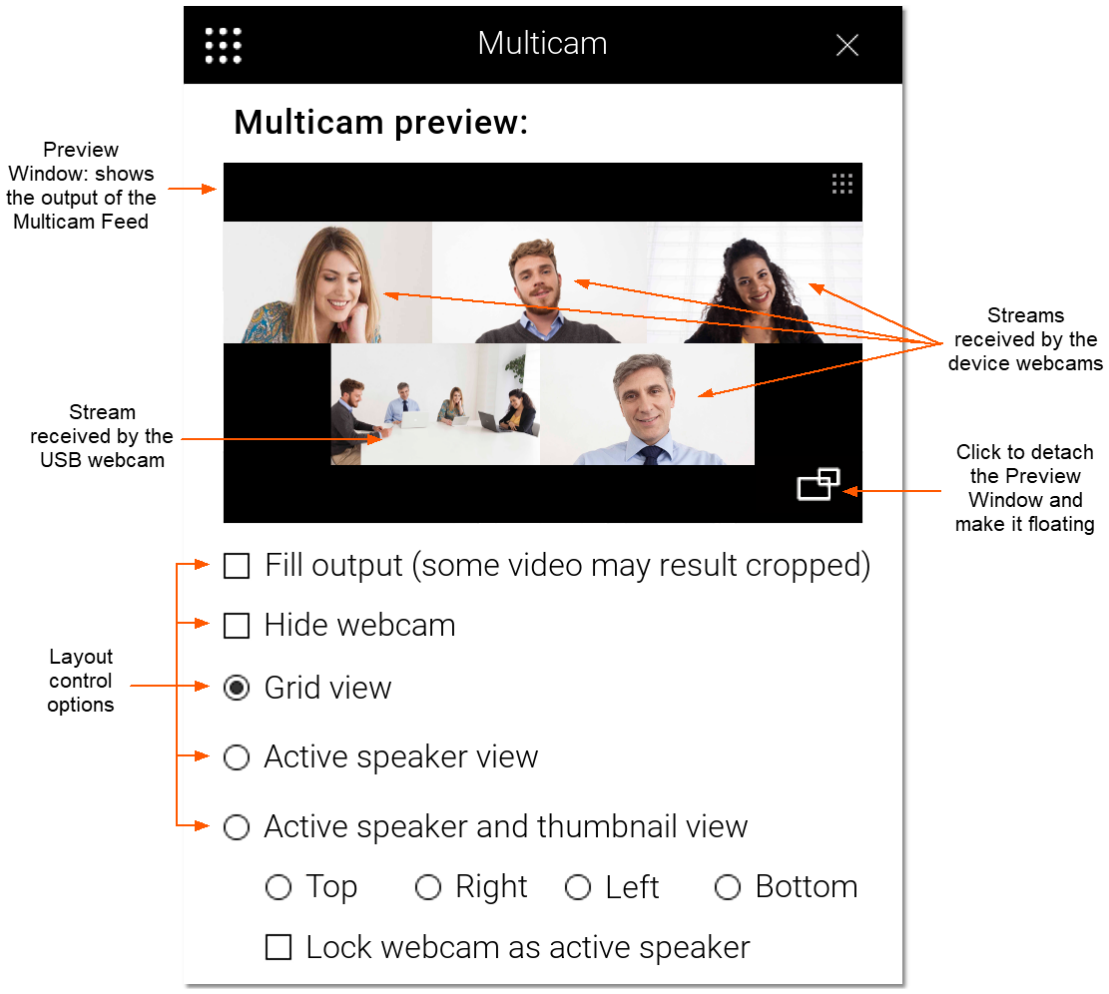


3.5.3 Multicam Layout

When you activate the Huddle Hub virtual webcam driver, your *Menu* offers you the possibility to configure the layout of the Multicam:

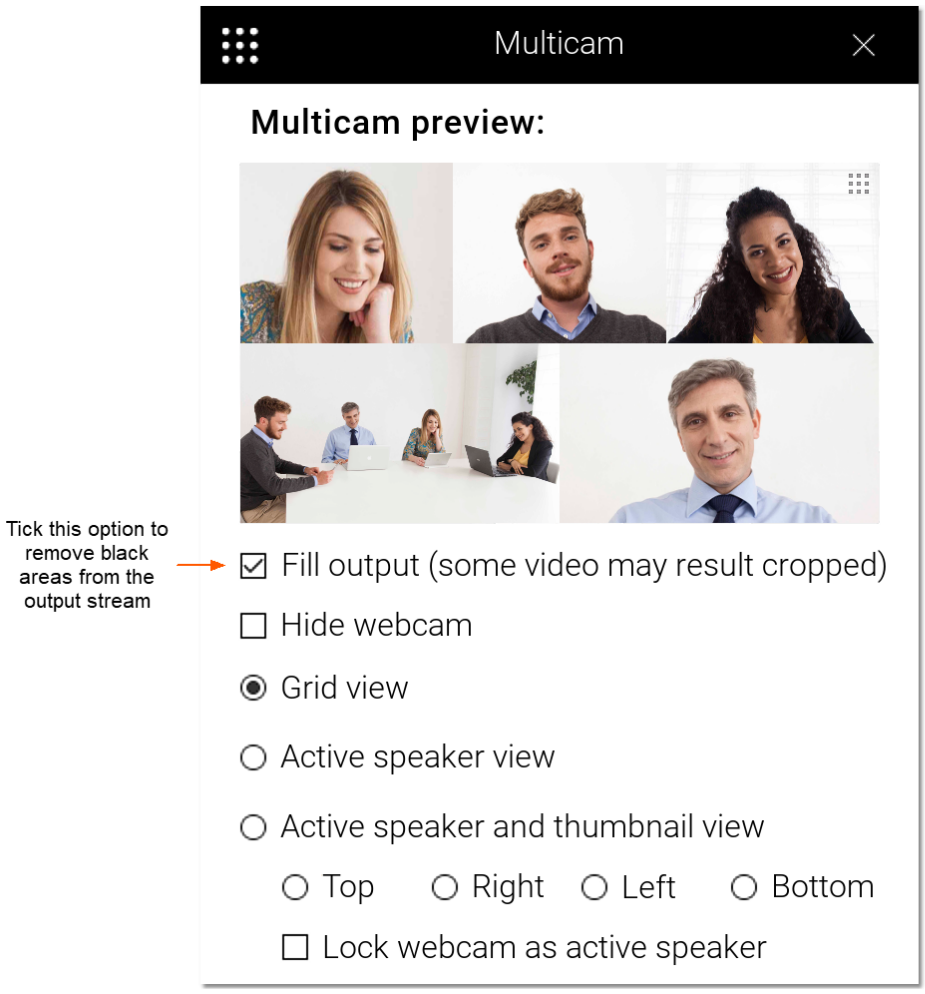


The *Multicam* window contains a preview of the current output video stream (which can be detached and turned into an independent window), that in real time shows the effect of the active options.



In the *Grid view* shown above, all cameras get placed in frames of the same size. The presence of black areas in the screen depends on the number of streams and on their aspect ratio.

If you want to remove black areas, you can tick the *Fill output* checkbox, that enlarges and crop the images to make they completely fill their share of the screen. Even number of streams will produce frames of the same size, while odd number of streams will cause frames to have different sizes.



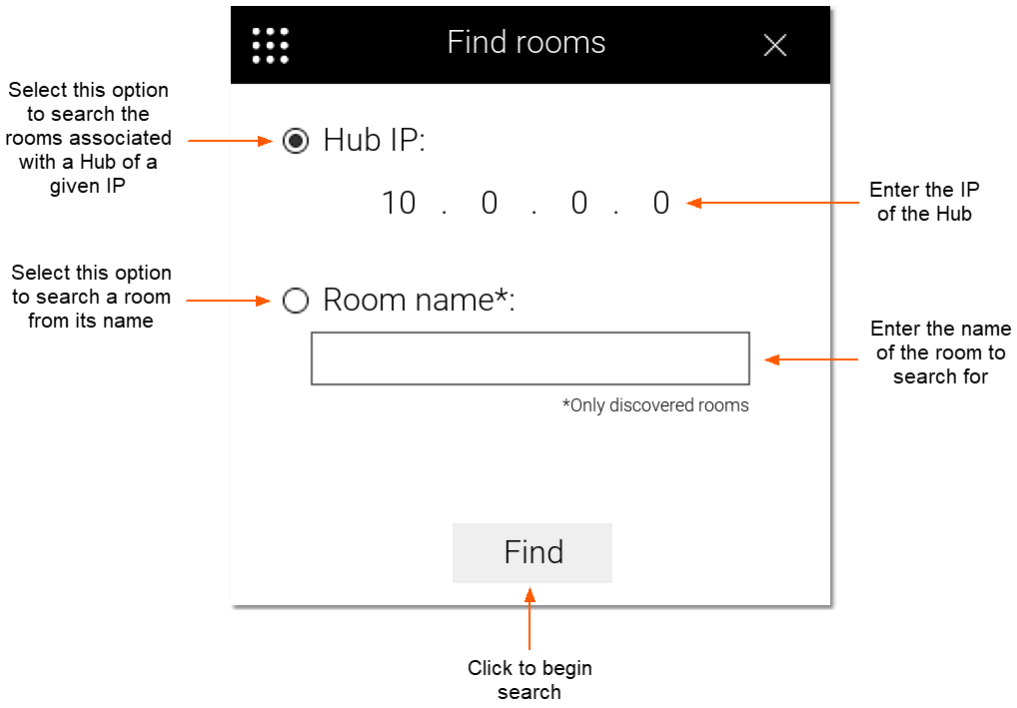
The *Active speaker view* - with or without thumbnails - creates a bigger frame for the Active Speaker, which can be any of the participants, or the room USB camera connected to the HHO unit, like in the example below:

Other checkboxes offer the possibility to remove the USB webcam stream from the output, or to lock it in the Active Speaker's frame, preventing other participants to take that role.

3.6 Finding Rooms

Under some network configurations, though your HHO units are connected to your LAN and properly configured, HHApp may not able to reach them. In other cases, the list of rooms is so long it would take you some time to browse it, and you would like to search the room by name.

In both situations, the *Find Rooms* window is what you need. You can open it by clicking on the magnifier placed in the upper-right corner of the *Toolbar*.



Searching by IP

Select the *Hub IP* option and enter the IP address of the HHO unit you want to reach in the underlying field, then click the **Find** button (see also Finding the IP address of a HHO unit 9).

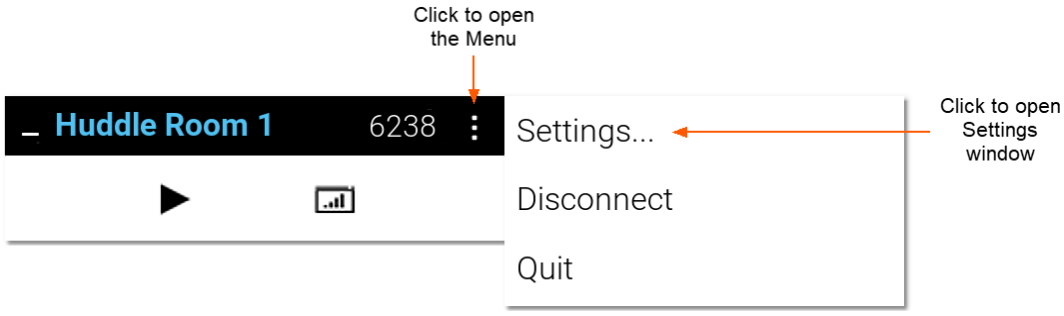
Searching by room name

Select the *Room name* option and enter the name - or a partial name - of the room you want to find in the underlying field, then click the **Find** button. You will be returned a list of all the rooms whose name contains the specified text.

This method works only for HHO units that can be reached by the discovery service of HHApp (see also Reaching a Room 8).

3.7 Settings

HHApp default configuration works for most situations. However, you can customize its settings to make it suit your needs and preferences. Click on the three-dots button in the *Toolbar* to open the *Menu*, then select the Settings item:



The *Settings* window is organized in sections, which will be described in the following chapters.

Some of the options can be changed only when you're not connected to a room.

3.7.1 Room info

This section appears only when you are connected to a room, and shows the info about the room itself.

Room name

The name of the room you are connected to.

Hub name

The name of the Huddle Hub unit you are connected to. Next to the name, there is a clickable link to the IP address of the hub, that can be used to reach its administration page, or to be communicated to participants who want to connect with a web browser.

Passcode

The passcode of the current session, if any.

Connected participants

The number of participants connected to the current session. If you tick the *Show count on top bar* checkbox, that number will appear in the title of the *Toolbar*.

3.7.2 General

My name

Identifies the Presenter in the *Presentation* window when the *Show my name on presentation* option is selected (see next chapter).

Launch at startup

If checked, HHApp will be automatically launched at every boot of your computer.

Disable power saving

If checked, automatic power saving standby will be disabled during sessions, because it causes Wi-Fi disconnection (recommended).

Disable system notifications

If checked, system notifications will be disabled during presentation, to prevent them to be visible to the other participants.

Keep Toolbar 'on top'

If checked, the *Toolbar* will remain on top of other windows when open.

3.7.3 Presentation

Show my name on presentation

If checked, when presenting your screen your name will appear at the bottom of the presentation (see also *My name* in previous chapter).

The *Add passcode* option makes the passcode of the session (if any) appear next to your name when you are presenting.

Show my cursor on presentation

If checked, when presenting your screen your mouse position will be shown on the devices receiving the presentation. You can make it appear like an arrow or like a laser pointer (red dot).

Maximize presenter window on presentation start

If checked, when you receive a presentation on your device, the presenter window opens in full screen mode.

Automatically lock presentation

If checked, when you start a presentation you will be automatically locked in, so as nobody else can take the presenter's role until you explicitely unlock it.

Highlight Toolbar when presenting

If checked, the Toolbar appears surrounded by a thin red frame when you are sharing your screen.

3.7.4 Multicam

My camera

Select the camera you want to use when adding your video stream to the Multicam.

3.7.5 Shortcuts

Presentation controls

Select the keyboard shortcut you want to use to start and to pause/resume a presentation.

Multicam controls

Select the keyboard shortcut you want to use to set yourself as Active Speaker during video-conferences with Multicam and Active Speaker layout.

3.7.6 Update

Current version

The version of HHApp you have in use. Click the **Check for updates** button if you want to connect to HRT's website and verify if a more recent of HHApp is available.

Check for updates at startup

If checked, at start-up HHApp will check for a more up-to-date version. If found, the Huddle Hub App download page will be opened in your default browser.

3.7.7 About

Support

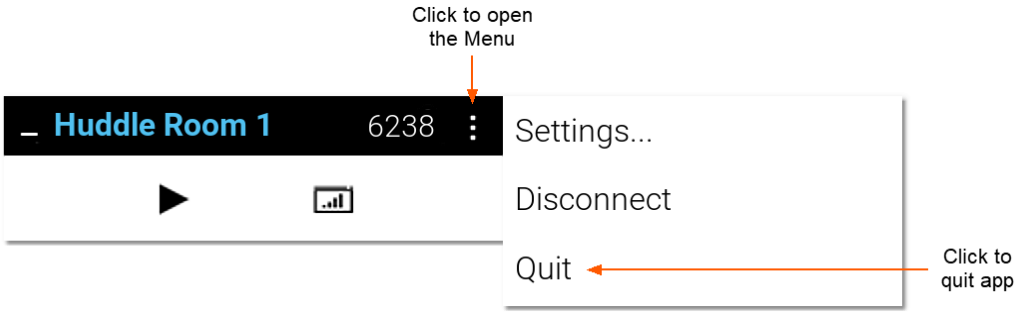
A clickable link that you can use to reach HRT's support page.

Send us a feedback

A clickable link that you can use to send a mail to HRT to report your feedback.

3.8 Quitting Huddle Hub App

If you want to stop HHApp, click on the three-dots button to open the *Menu*, then select the Quit item:


Click to open
the Menu
Huddle Room 1
6238
Settings...
Disconnect
Quit
Click to
quit app

4 Attending a session with the Mobile App (Android and iOS)

4.1 Installation

4.1.1 Minimum requirements

Android App

OS	Android® 5 or higher

iOS App

OS	iOS® 11 or higher

4.1.2 Installing the Mobile App

To participate in a Huddle Hub session with a mobile device, you need the Huddle Hub App. The Android version is freely available on Google Play app store (Huddle Hub page), while the iOS version is freely available on Apple app store (Huddle Hub page).

You can reach the app stores also from HRT's website:

https://www.hrt.website/app/

Or by scanning one of the following QR codes:

Google Play

Apple App Store

Please follow your device instructions to know how to download and install apps.

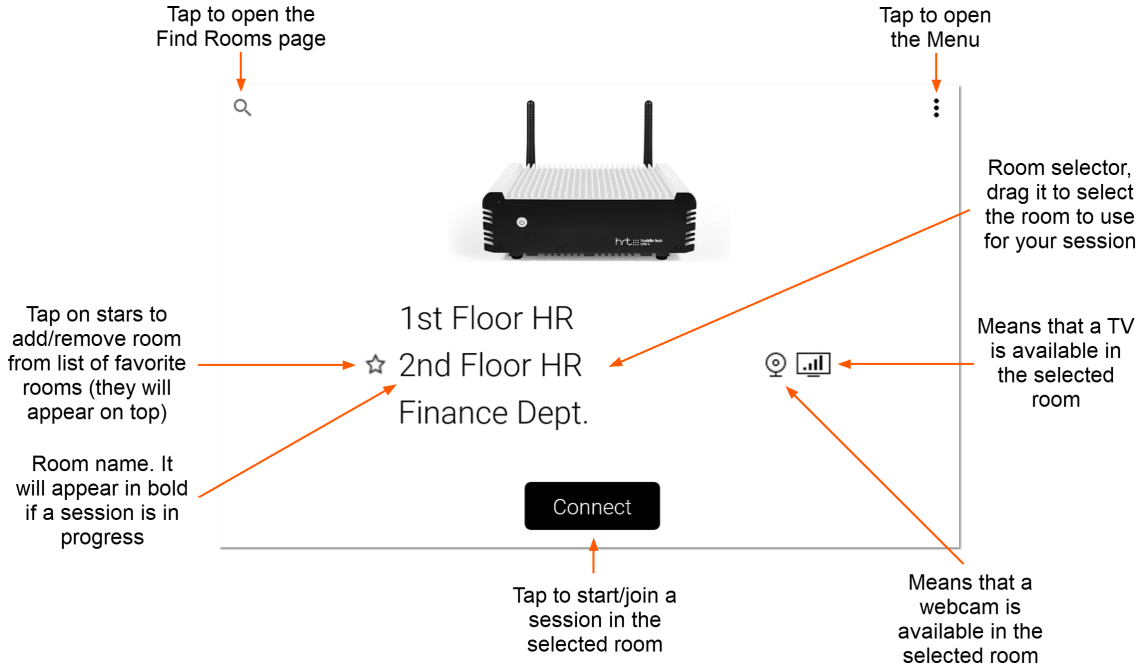
4.1.3 Updating the Mobile App

Your iOS or Android app can be updated from your device app store. This can happen automatically or not, depending on the settings of your mobile device.

4.2 Starting or Joining a Session

To start or join a session, you must have HHApp installed and running. You can start it from the icon you can find on your mobile. The actual appearance of HHApp icon depends on your OS and on your screen settings, but it will be similar to the following:

The actual appearance and proportions of the HHApp screen will depend on the size of your device screen and on the OS you are using, but it will be similar to the following:

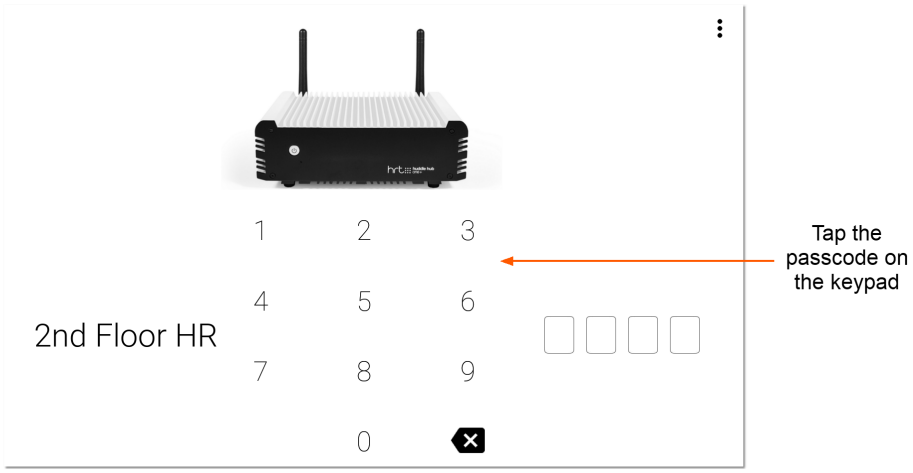


The room selector in the center of the page lists the available rooms. On the right of the currently selected room, a few icons inform you about the availability of a TV screen or of a webcam. By tapping on the star left of the selected room, you can add or remove any room from your **favorite list** (favorite rooms show on top of the list).

If one or more rooms don't appear in the list (this could depend on your LAN configuration), or if you have a long list of rooms and you want to search your one by its name, you can tap the magnifier in the top-left corner of the *screen* and open the Find Rooms 39 page.

Rooms whose name appears in bold when selected, have a session in progress, and if you select them you **join that session**. If room name is in regular font, by selecting it you **start a new session**. Tap on the **Connect** button to start or join the session in the selected room.

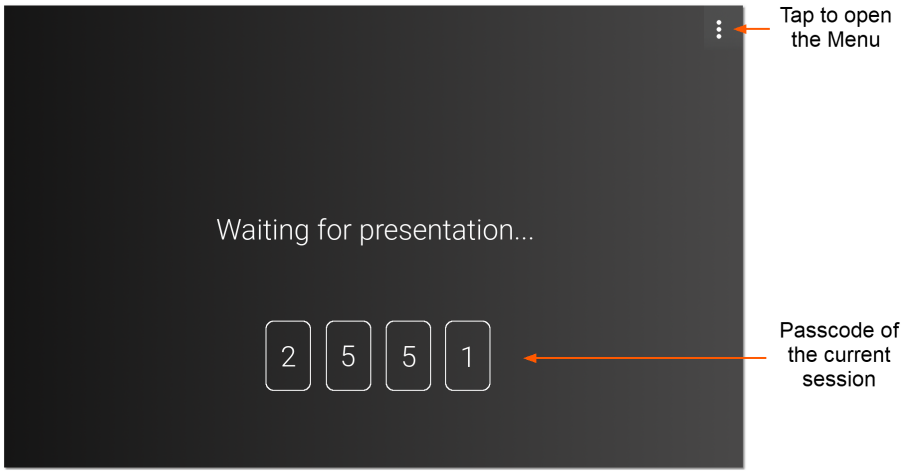
When joining a **passcode-protected session** started by someone else, you are required to enter the passcode:



4.3 Sending and Receiving a Presentation with Android

Receiving a Presentation

When you start a session, or when you join a session and nobody else is presenting, your screen will appear similar to the following:



The **passcode** appears only if the room has been configured to be passcode-protected. In this case, you have to tell the passcode to the other participants in order to allow them to join your same session.

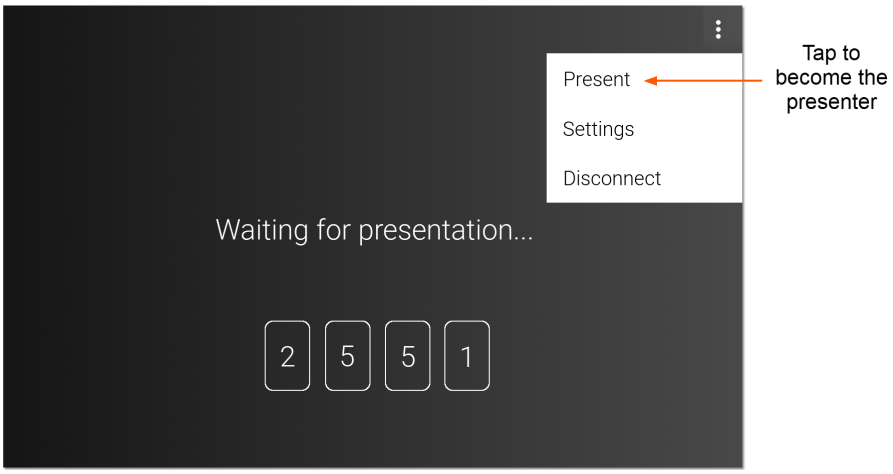
If some other participant is already presenting, your screen shows the presenter's screen.

If a **multi-presentation is in progress**, you can **select which screen you want to receive**, by keeping a finger on the screen until a selection window appears.

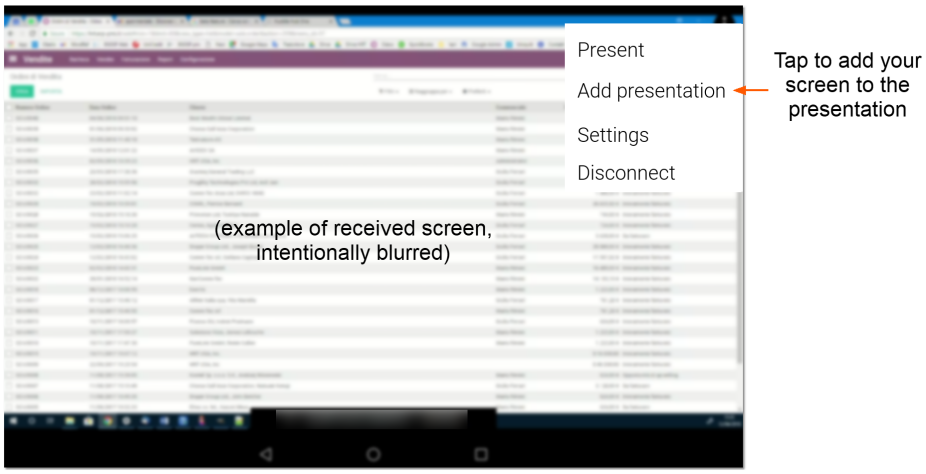
When receiving a presentation, you can **zoom** into the received image with a triple tap on your screen.

Presenting

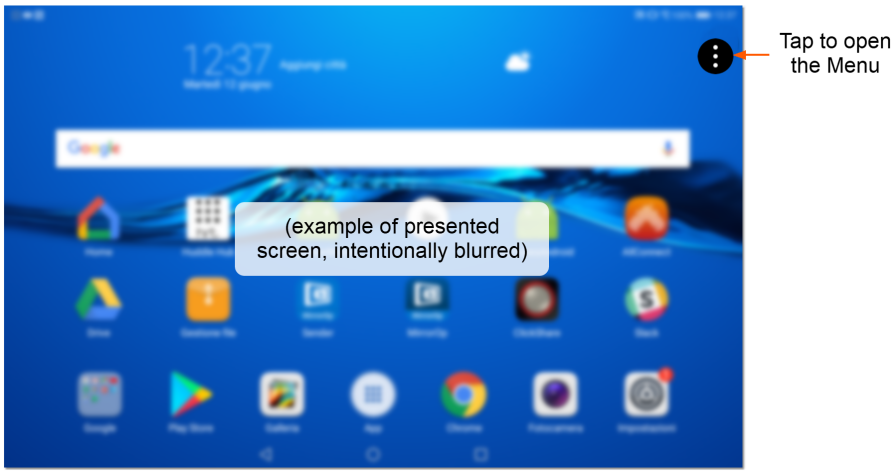
You can **become the presenter** - replacing the current one - by opening the three-dots *Menu* in upper-right corner of your screen and tapping the **Present** item:

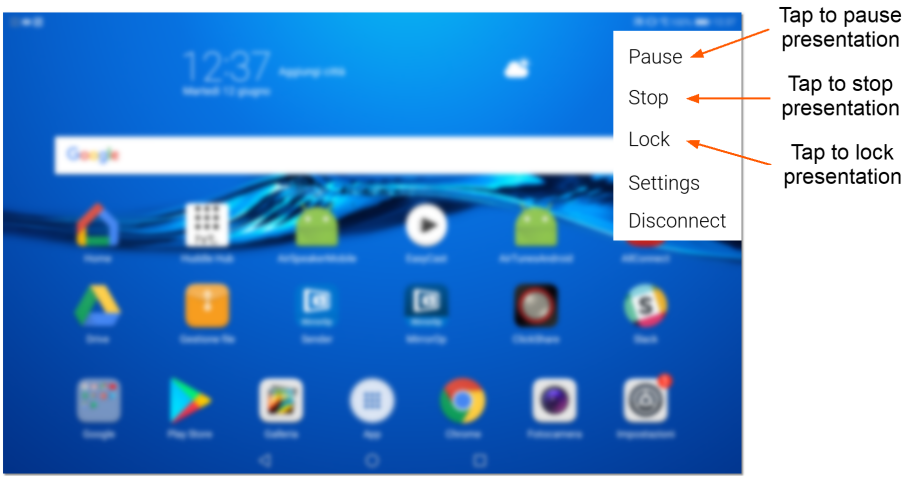


Finally, if multi-presentation is enabled (you are in the hub room and a TV is plugged to the HHO unit), another menu option allows you to **add your screen to the presentation**, without replacing the current presenter (up to four simultaneous screens):



After you started a presentation, your main screen will appear again, and it will be visible on the TV screen and/or on the devices that are receiving the presentation. A three-dots button will be visible in the upper-right corner of the screen, and you can tap it to open the *Menu* and control your presentation:





You can now:

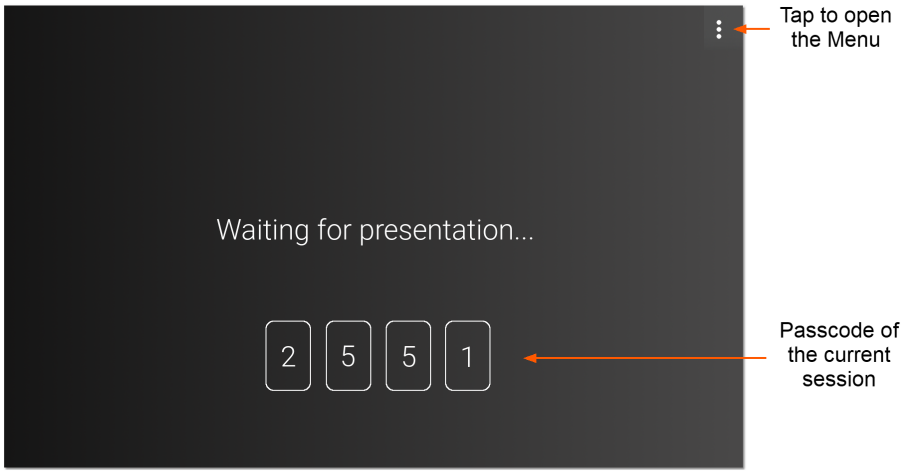
- **pause the presentation**: participants will see the last snapshot of your screen before you paused it;
- **stop the presentation**: you will not be sharing your screen anymore;
- **lock the presentation**: no other participant will be able to present his/her screen, until you unlock the presentation again.

When a presentation has been paused, you can **resume** it anytime by opening the *Menu* and tapping the **Resume** item.

4.4 Sending and Receiving a Presentation with iOS

Receiving a Presentation

When you start a session, or when you join a session and nobody else is presenting, your screen will appear similar to the following:



The **passcode** appears only if the room has been configured to be passcode-protected. In this case, you have to tell the passcode to the other participants in order to allow them to join your same session.

If some other participant is already presenting, your screen shows the presenter's screen.

If a **multi-presentation is in progress**, you can **select which screen you want to receive**, by keeping a finger on the screen until a selection window appears.

When receiving a presentation, you can **zoom** into the received image: double-tap on the screen with three fingers to enter zoom mode. You can double tap with three fingers while keeping your fingers on the screen after the second tap to control zooming by moving your fingers up and down the screen. Double-tap with three fingers again to exit zoom mode.

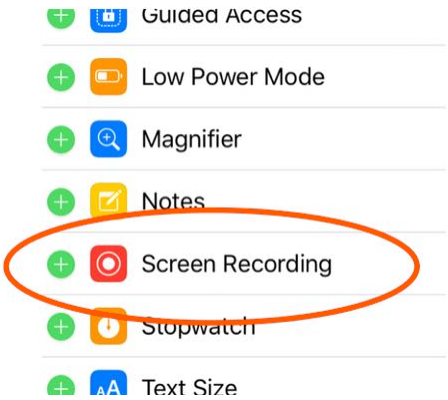
Zoom mode is available if you enabled it:

1. Open *Settings*
2. Choose *General*
3. Select *Accessibility*
4. Select *Zoom* and enable it

Presenting

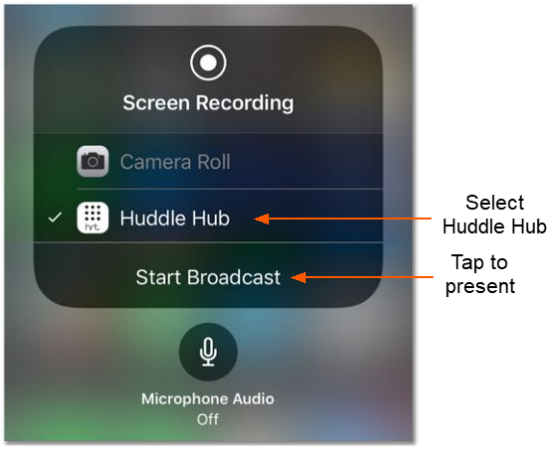
In order to **present with iOS**, you must **enable Screen Recording**:

1. Open *Settings*
2. Choose *Control Center*
3. Enable *Access Within Apps*
4. Select *Customize Controls*
5. Include *Screen Recording*



To **become the presenter** you have to:

1. Swipe up from the bottom of your screen
2. Press and hold the *Record* button
3. Find and select *Huddle Hub* in the list
4. Tap *Start Broadcast*

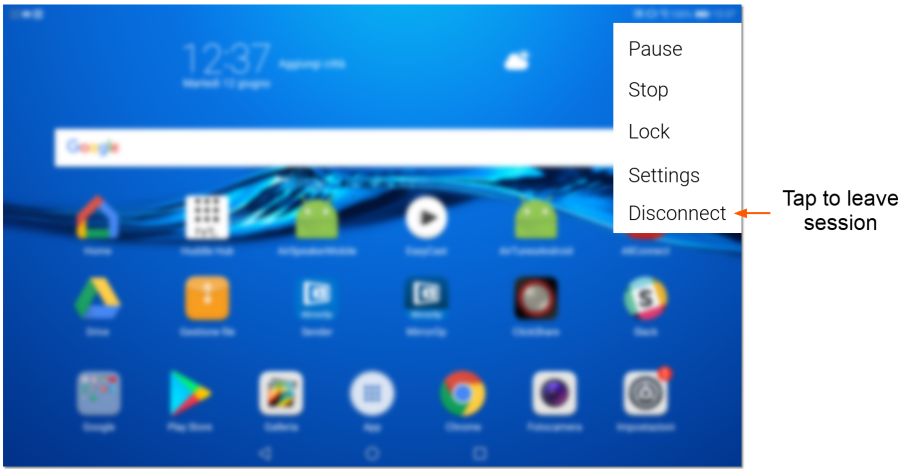


To **stop presenting**, you have to:

1. Swipe up from the bottom of your screen
2. Press the *Record* button

4.5 Leaving a Session

To leave the current session, click on the three-dots button to open the *Menu*, then select the **Disconnect** item:



If you are the Presenter, HHApp asks whether you want to **leave the session** or **end the session** for all the participants.

If you are the only remaining participant of the session, Huddle Hub automatically closes the session and makes the room available again for new sessions.

When you leave a session, HHApp will not close itself, remaining available in your Tray Area.

4.6 Using Huddle Hub in video-conferences

When sessions involve people located remotely, Huddle Hub can play an effective role in supporting the teamwork and maximize the participant's experience.

The Huddle Hub solution integrates perfectly with most video-conference software, doesn't force you to adopt any particular tool and allows you to use the program you are familiar with, or that better suits your needs.

When a participant of a session starts a video call on his PC/device, he can simply **start presenting to make the remote participants visible on the TV screen or on the other participants' screens**, if they're receiving the presentation.

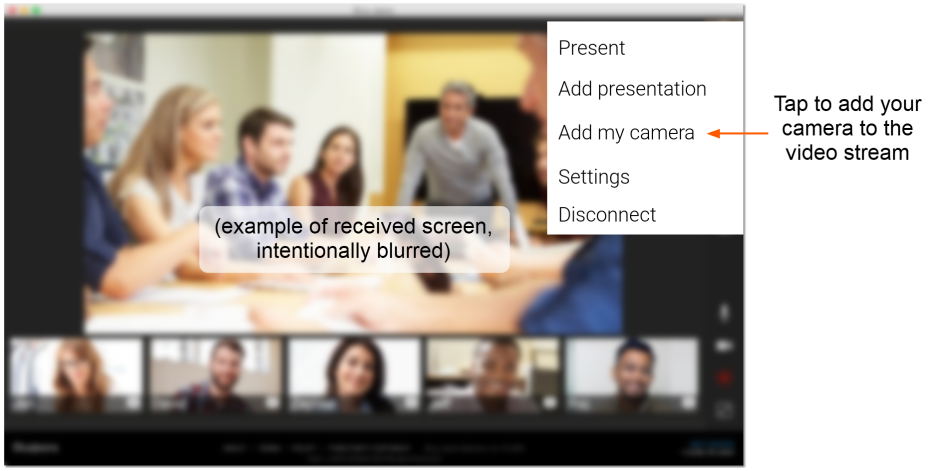
Mobile devices do not permit installing a driver and using an external camera, thus the Wireless Webcam feature is available only for the desktop version of HHApp. However, you can add your mobile device camera to the Multicam and benefit of a more pleasant and profitable video-conference experience. It's more effective, natural, and comfortable, because participants are not forced to shrink to one side of the table to get framed by a webcam, do not appear too small like when a wide-

angle camera is being used, and are not required to continuously adjust a PTZ camera with its remote control.

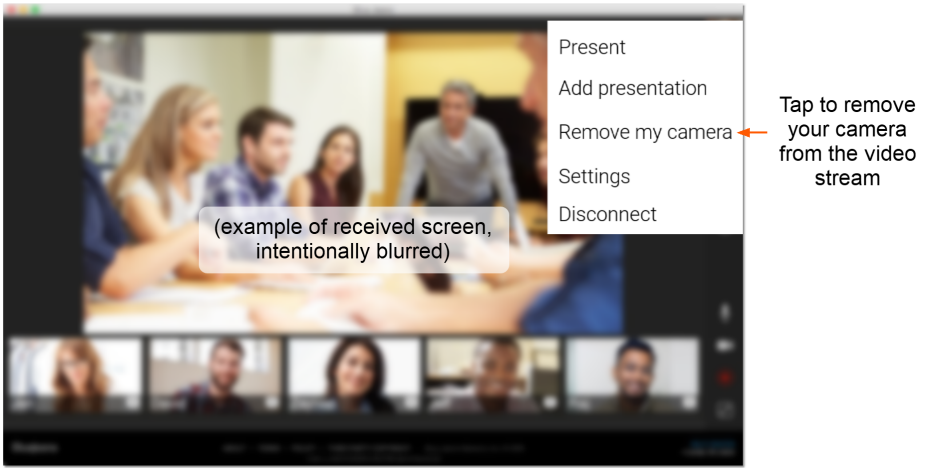
4.6.1 Multicam

HHO offers Multicam, the possibility to combine the video stream of a standard USB webcam with streams captured from up to 6 participants' devices, thus creating a true multi-camera video-conference system.

When the Presenter connects to the Wireless Webcam virtual driver to start a video-conference, your *Menu* changes as follows:



As you see, you can **include your device camera** into the Multicam with just one tap. Similarly, you can **remove your device camera** from the stream at anytime:



If the Multicam layout is set to *Active speaker*, you can **become the Active Speaker** - that is the participant whose camera stream appears in the main frame of the layout - just tapping on the screen.

4.7 Finding Rooms

Under some network configurations, though your HHO units are connected to your LAN and properly configured, HHApp may not able to reach them. In other cases, the list of rooms is so long it would take some time to you to browse it, and you would like to search the room by name.

In both situations, the *Find Rooms* page is what you need. You can open it by clicking on the magnifier placed in the upper-left corner of the main app page, it will show an input field and a virtual keyboard.

Searching by IP

Type the IP address of the HHO unit you want to reach in the input field, then tap the magnifier button (see also Finding the IP address of a HHO unit 9).

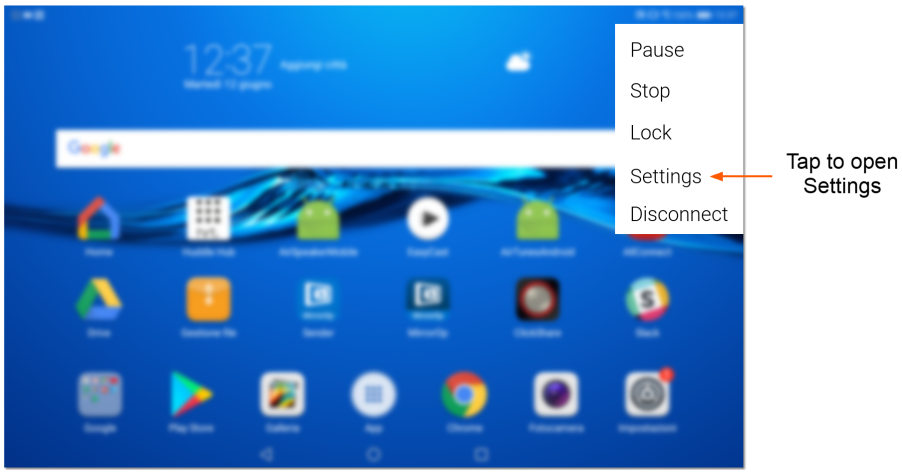
Searching by room name

Enter the name - or a partial name - of the room you want to find in the input field, then tap the enter / magnifier button. You will be returned a list of all the rooms whose name contains the specified text.

This method works only for HHO units that can be reached by the discovery service of HHApp (see also Reaching a Room 8).

4.8 Settings

HHApp default configuration works for most situations. However, you can customize its settings to make it suit your needs and preferences. Tap on the three-dots button in the *Toolbar* to open the *Menu*, then select the **Settings** item:



The *Settings* window is organized in sections, which will be described in the following chapters.

Some of the options can be changed only when you're not connected to a room.

4.8.1 Room info

This section appears only when you are connected to a room, and shows the info about the room itself.

Room name

The name of the room you are connected to.

Hub name

The name of the Huddle Hub unit you are connected to. Next to the name, there is a clickable link to the IP address of the hub, that can be used to reach its administration page, or to be communicated to participants who want to connect with a web browser.

Passcode

The passcode of the current session, if any.

Connected participants

The number of participants connected to the current session.

4.8.2 General

My name

Identifies the Presenter in the *Presentation* window when the *Show my name on presentation* option is selected (see next chapter).

4.8.3 Presentation

Show my name on presentation

If enabled, when presenting your screen your name will appear at the bottom of the presentation (see also *My name* in previous chapter).

The *Add passcode* option makes the passcode of the session (if any) appear next to your name when you are presenting.

Enable zoom with triple tap

If enabled, when you receive a presentation on your device, you can triple tap on the screen to zoom in the received screen.

High resolution (heavy CPU load)

If enabled, this option increases the resolution of screen sent during presentations, at the price of a higher CPU load.

Automatically lock presentation

If enabled, when you start a presentation you will be automatically locked in, so as nobody else can take the presenter's role until you explicitely unlock it.

4.8.4 Multicam

Show preview

Enable this option if you want to see a small preview of your own camera video stream during Multicam.

4.8.5 About

Current version

The version of HHApp you have in use.

Support

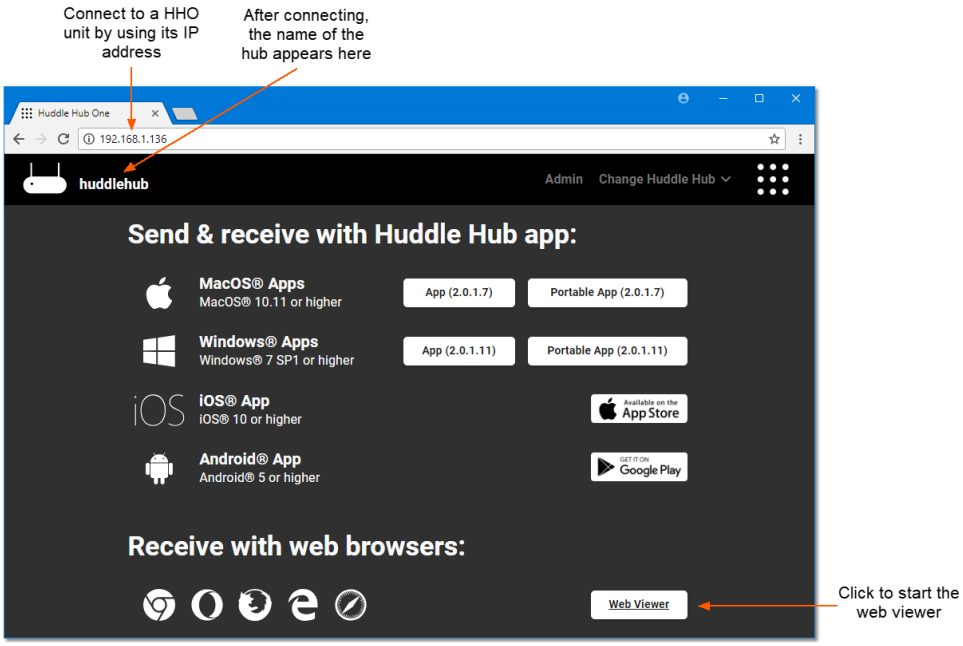
A clickable link that you can use to reach HRT's support page.

5 Attending a session with a Web Browser

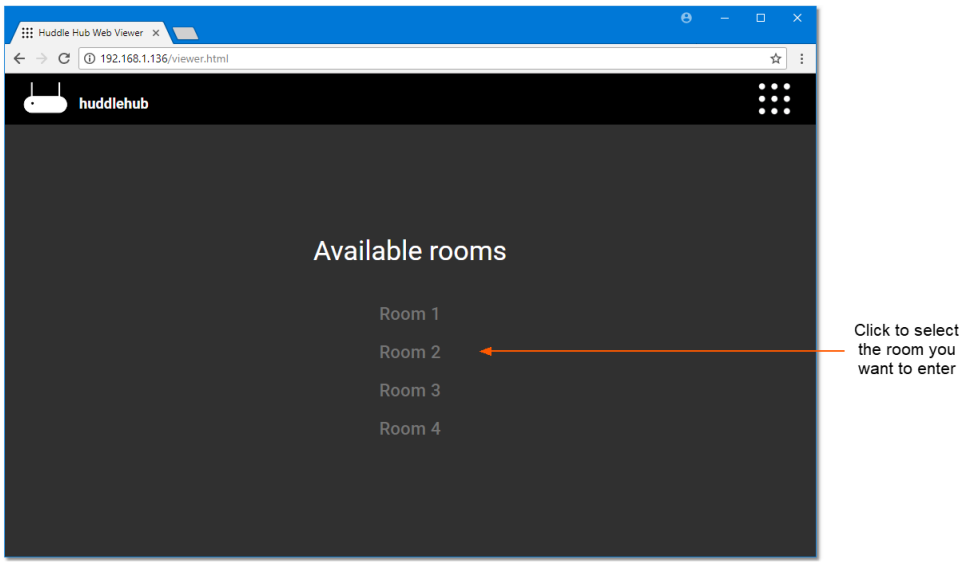
The Huddle Hub solution offers you the possibility to attend a presentation session using your Web Browser, without installing or launching any software. The current version allows your to **receive a presentation**, but not to present your screen.

Receiving the presentation requires very simple steps:

1. Get the IP address of the HHO unit you want to connect to (see Finding the IP address of a HHO unit 9).
2. Type it in the address bar of your browser, and press Enter.
3. Locate the link of the Web Viewer, at the bottom of the page, and click it.

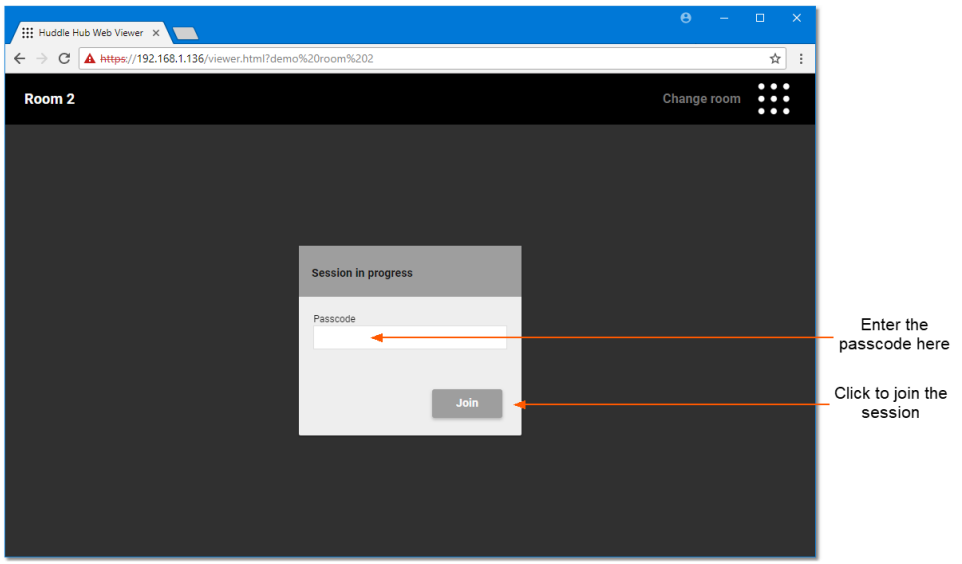


The page that follows shows the list of the available rooms, and you have to select the one you want to enter:

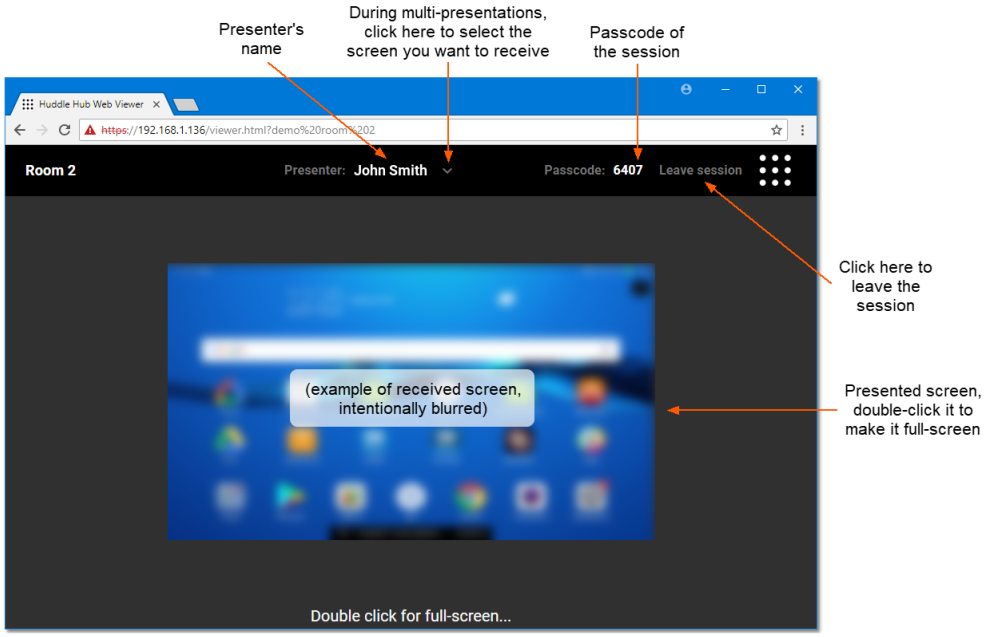


While connecting to a room, you may receive a security warning from your browser. This happens because the SSL certificate provided by the HHO web server is self-signed, and this is a normal situation with secure servers located on embedded systems. You can confirm you want to proceed.

When you are joining a passcode-protected session, you are then required to enter the passcode:



Now you are receiving the presentation:



You can **make the presentation full-screen** by double-clicking it, and you have also the possibility to **choose among different presented screens** during a multi-presentation, or to **leave the session**.

6 Attending a session with an Android TV

6.1 Installation

6.1.1 Minimum requirements

OS	Android® 5 or higher

6.1.2 Installing the TV App

To receive the presentation of a Huddle Hub session with an Android TV, or with an Android TV box or dongle connected to your TV, you need the Android version of Huddle Hub App, which is freely available on the Google Play / Amazon Fire app stores.

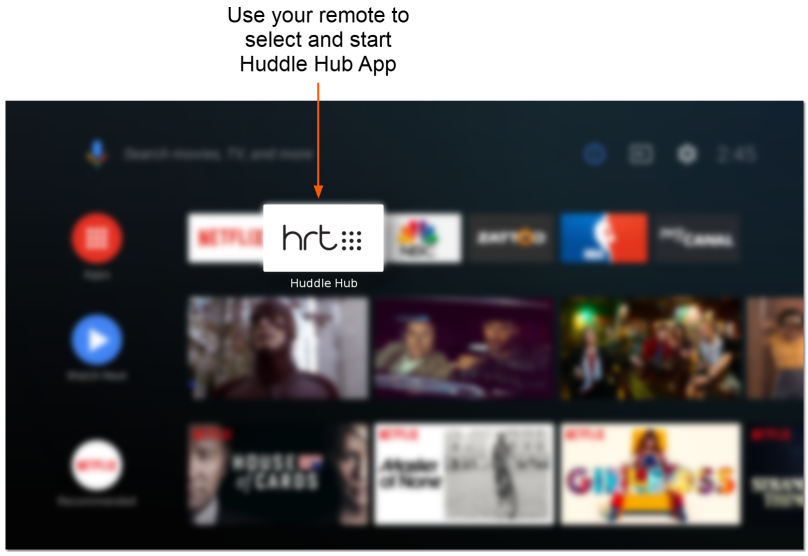
Please follow your device instructions to know how to download and install apps.

6.1.3 Updating the TV App

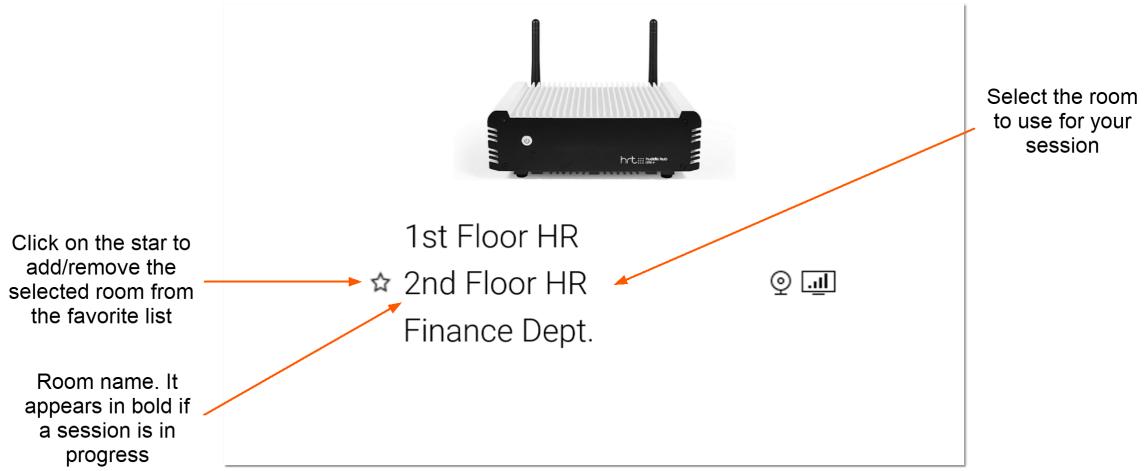
Your Android TV app can be updated from your device app store. This can happen automatically or not, depending on the settings of your device.

6.2 Starting or Joining a Session

To start or join a session, you must have HHApp installed and running. You can start it from the icon find on your TV screen. The actual appearance of HHApp icon depends on your device and on the Android version it is running, but it will be similar to the following:



The actual appearance and proportions of the HHApp screen will depend on the size of your device screen and on the OS you are using, but it will be similar to the following:



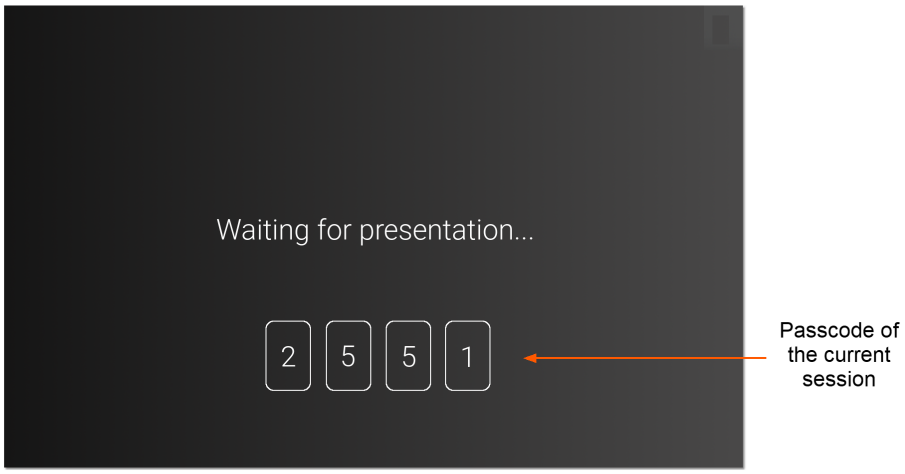
The room selector in the center of the page lists the available rooms. On the right of the currently selected room, a few icons inform you about the availability of a TV screen or of a webcam.

Rooms whose name appears in bold when selected, have a session in progress, and if you select them you **join that session**. If room name is in regular font, by selecting it you **start a new session**. Use the arrows of your remote to select a room, and then click with the Enter button to start/join a session in that room.

When joining a **passcode-protected session** started by someone else, you are required to enter the passcode.

6.3 Receiving a Presentation

When you start a session, or when you join a session and nobody else is presenting, your screen will appear similar to the following:



The **passcode** appears only if the room has been configured to be passcode-protected. In this case, you have to tell the passcode to the other participants to allow them to join your same session.

If some other participant is already presenting, your screen shows the presenter's screen.

If a **multi-presentation is in progress**, you can **select which screen you want to receive**: keep the Enter button of your remote pressed for a few seconds, then a selection window appears.

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