

# KATCH ONE – HDMI TROUBLESHOOTING GUIDE

The purpose of this document is to provide a detailed guide for setting up and troubleshooting KATCH ONE when using the HDMI connection. The guides are based on the experience gathered during the extensive field testing during development of KATCH ONE.

## HDMI Features

Two HDMI features are used:

### HDMI-CEC

CEC (Consumer Electronics Control) is a feature of HDMI designed to allow users to command and control devices connected through HDMI by using only one remote control. For example, by using the remote control of a television set to control KATCH ONE.

Different TV brands use different names for the CEC feature. The following list includes some examples:

- Samsung: AnyNet+
- Sony: Bravia Sync/Link
- Philips: EasyLink
- LG: SimpLink

### HDMI-ARC

ARC (Audio Return Channel) is an audio link feature of HDMI 1.4 meant to replace other cables between the TV and the A/V receiver or speaker system. This direction is used when the TV is the one that generates or receives the video stream instead of the other equipment. A typical case is the running of an app on a smart TV such as Netflix, but reproduction of audio is handled by the other equipment. Without ARC, the audio output from the TV must be routed by another cable, typically optical or mini jack, into the speaker system.

ARC is activated using CEC commands communicated internally between KATCH ONE and the TV, so CEC must be enabled for ARC to work.

## Using TV with HDMI CEC and ARC connection

Connecting KATCH ONE to the TV using only a HDMI cable requires that the TV supports HDMI 1.4 (minimum) with ARC functionality. If your TV does not support this, then you must use HDMI together with an Optical connection for the audio signal. Please see the next section for how to use the optical connection.

### Prerequisites

- TV must support HDMI 1.4 or later
- TV must have a HDMI input with ARC support. Typically the input is labeled with “(ARC)”
- The HDMI cable must support HDMI v1.4 or later, also called a “High Speed HDMI Cable”
- HDMI CEC must be enabled in the TV settings
- If a setting is available for HDMI ARC, then this must be enabled in the TV settings as well
- Receiver/HDMI/ARC Audio format must be set to “PCM” only (though some TVs will also work when set to “Auto” or similar).

### Connecting KATCH ONE with TV

1. Make sure that all prerequisites are fulfilled

2. Power off TV
3. Disconnect power supply from KATCH ONE
4. Connect HDMI cable between “HDMI” input on KATCH ONE and “HDMI (ARC)” input on TV
5. Reconnect power supply to KATCH ONE
6. Power on TV
7. In the TV settings, select “Receiver”/”HDMI”/”ARC” or similar name as audio output
8. Test that the TV audio is now played through KATCH ONE, and that Volume Up/Down and Mute/Unmute is working from the TV remote.
9. Power off TV and check if KATCH ONE powers off as well. Power on TV again, and check that KATCH ONE (after some time) powers on again as well. KATCH ONE will power on as soon as the TV instructs it to, but different TV sets behave differently in how quickly they activate connected HDMI equipment. Some TV sets also have a “Quick Start” setting (or similar name) that can be enabled for possibly quicker startup of both TV and connected HDMI equipment.  
If KATCH ONE does not power on or off with the TV, but everything else is working, then check the HDMI CEC settings in the TV for any additional settings

## Using TV with HDMI CEC and Optical Audio connection

If using the “OPTICAL IN” connection with the TV Symbol, then you can still benefit from the HDMI-CEC functionality.

### Prerequisites

- HDMI CEC must be enabled in the TV settings
- Optical Audio format must be set to “PCM” only (though some TVs will also work when set to “Auto” or similar).

### Connecting KATCH ONE with TV

1. Make sure that all prerequisites are fulfilled
2. Power off TV
3. Disconnect power supply from KATCH ONE
4. Connect HDMI cable between “HDMI” input on KATCH ONE and any “HDMI” input on TV. Avoid using a “HDMI (ARC)” input on the TV, as this can cause unexpected behavior with the TV trying to activate ARC even when optical connection and settings are used.
5. Connect the optical Audio Out signal from the TV to the “OPTICAL IN” input with the TV symbol on KATCH ONE.
6. Reconnect power supply to KATCH ONE
7. Power on TV
8. In the TV settings, select “Optical” or similar name as audio output
9. Test that the TV audio is now played through KATCH ONE, and that Volume Up/Down and Mute/Unmute is working from the TV remote.
10. Power off TV and check if KATCH ONE powers off as well. Power on TV again, and check that the KATCH ONE (after some time) powers on again as well. KATCH ONE will power on as soon as the TV instructs it to, but different TV sets behave differently in how quickly they activate connected HDMI equipment. Some TV sets also have a “Quick Start” setting (or similar name) that can be enabled for possibly quicker startup of both TV and connected HDMI equipment.  
If KATCH ONE does not power on or off with the TV, but everything else is working, then check the HDMI CEC settings in the TV for any additional settings

### Additional notes when using the Optical connection

Note that besides HDMI-CEC power on/off control, then the “OPTICAL IN (TV)” input can also automatically power on/off on activation/deactivation of the optical signal.

The timing of when a TV activates/deactivates the optical signal varies between the different TV manufacturers and models. KATCH ONE will power on as soon as the signal carrier is activated, and it will power off 20 minutes after the signal carrier has been deactivated and no other user actions have been performed or input signals applied.

## Using TV with AUX IN

If your TV does not support HDMI-ARC and it does not have Optical Audio out, then it is also possible to connect an Analog Audio out from the TV to KATCH ONE. But please note that HDMI-CEC is not enabled for AUX IN. Depending on the type of Analog Audio out from the TV, you might have to experiment with adjusting the volume both from the TV and KATCH ONE. Avoid adjusting either TV or KATCH ONE to extreme levels.

## Troubleshooting FAQ

### **I just installed my KATCH ONE, and it is not working**

Please re-check that all mentioned prerequisites are fulfilled, and try the installation procedure once more.

If still not working, then please consider and check the following:

- Try with another HDMI/Optical cable, or test the cable with other equipment to make sure that it works.
- Powering off and on again the TV an extra time can also sometimes make wonders.

Getting HDMI equipment to work can be tricky, as other HDMI equipment connected to the same TV, and sometimes even the TV itself, can behave differently depending on the very specific mix of equipment.

The following actions can be performed to identify issues with a specific setup:

- Disconnect any other HDMI equipment connected to the TV, including HDMI adapters of any type
- Disconnect any other Audio equipment connected to the TV
- Disconnect any Optical audio cables from the TV (make sure the cable is disconnected from the TV itself)
- After disconnecting any equipment, power off and on again the TV, and test if KATCH ONE is now working.
- If it now works with other equipment disconnected, then reconnect other equipment one at a time, and identify the specific equipment breaking the functionality.

If you are unable to solve HDMI ARC related issues with your specific setup (TV + other connected equipment), then consider using an Optical connection for Audio Out from your TV to KATCH ONE.

### **My system has been working, but it suddenly stopped, and/or it sometimes works and sometimes not**

In most cases, a temporary issue can be solved by powering the TV off and on again.

As powering off and on the TV can be time-consuming, KATCH ONE itself also provides two methods for re-initializing the HDMI connection. When KATCH ONE is powered on and HDMI is selected as source, then you can try one of the following:

- Manually power down using either the remote control for KATCH ONE or by long-pressing the power button directly on KATCH ONE. Once powered down, power it up again using either the remote control for KATCH ONE or by short-pressing the power button directly KATCH ONE.
- Using KATCH ONE remote control, simply press the HDMI source button again while HDMI is already selected as source. Wait 5-10 seconds before retrying if necessary.

Other things to consider if a problem persists:

- Have you connected any new equipment to the TV? If yes, then try disconnecting the new equipment, and power cycle TV and KATCH ONE.
- Has the TV firmware been updated, either automatically or by you, around the time the system stopped working? If yes, then please refer to the TV manufacturer support for any known issues.
- If you are unable to solve HDMI ARC related issues with your specific setup (TV + other connected equipment), then consider using an Optical connection for Audio Out from your TV to KATCH ONE.

#### **KATCH ONE does not power on/off with TV**

- Make sure that CEC is enabled in the TV settings, and look for any additional settings to enable like “Auto Power On Devices” or similar name.

#### **KATCH ONE has powered off while the TV is still powered on**

KATCH ONE automatically powers down if there is no audio signal or user activity within 20 minutes. This includes if the TV audio has been muted, and for example if a streaming service has been paused or ended.

KATCH ONE will not automatically power on if the TV is un-muted again or the streaming service resumed. The user must manually power on KATCH ONE using either the remote control or the power button directly on KATCH ONE, alternatively power off and on the TV again.