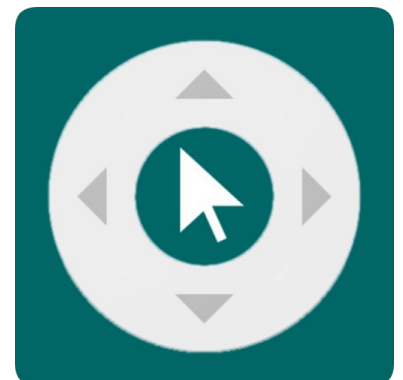


# Zank Remote Installation and Usage Guide



**Version:** 1.7  
**Date:** Wednesday, January 10, 2024  
**Authors:** Richard Mullins



# Contents

<b>Overview.....</b>	<b>5</b>
<b>Features.....</b>	<b>6</b>
<b>Installation.....</b>	<b>7</b>
Add the driver.....	7
Install the Zank App.....	7
App Extended mode.....	8
<b>Configuration.....</b>	<b>9</b>
Driver Settings.....	9
IP.....	9
Port.....	9
Licence.....	9
App List Configuration.....	9
Use Blacklist.....	10
Blacklist.....	10
Whitelist.....	10
<b>App Launching.....</b>	<b>11</b>
App List.....	11
Direct App Launching.....	11
<b>Keyboard Configuration.....</b>	<b>12</b>
Direct Text Entry.....	12
Full Text Search.....	12
<b>Driver Commands.....</b>	<b>14</b>
Driver Commands.....	14
Up [TAG: Up].....	14
Down [TAG: Down].....	14
Left [TAG: Left].....	14
Right [TAG: Right].....	14
OK [TAG: OK].....	14
Enter [TAG: Enter].....	14
OK Long Press.....	14
Play/Pause [TAG: Play].....	14

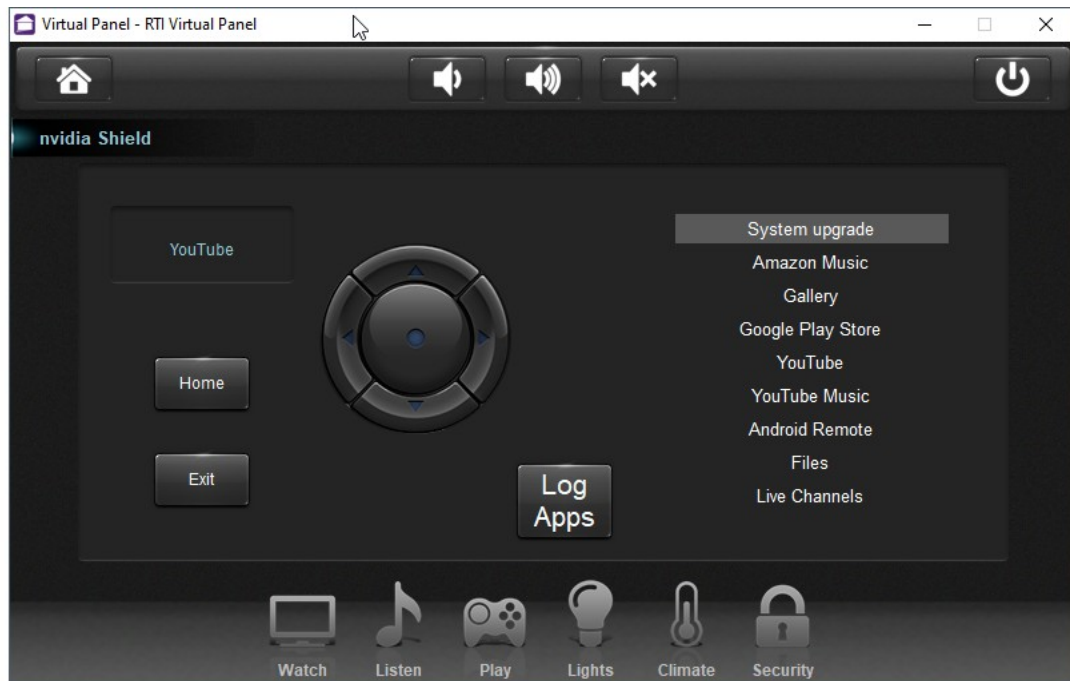
Scan Back [TAG: Scan Back].....	14
Scan Forward [TAG: Scan Forward].....	15
Previous [TAG: Skip Back].....	15
Next [TAG: Skip Forward].....	15
Home [TAG: Home].....	15
Menu [TAG: Menu].....	15
Back [TAG: Menu].....	15
Guide [TAG: Menu].....	15
Recall [TAG: Prev].....	15
Channel Up [TAG: Channel Up].....	15
Channel Down [TAG: Channel Down].....	15
Page Up [TAG: Page Up].....	15
Page Down [TAG: Page Down].....	15
Search [TAG: Search].....	16
Number [TAG: 0 - 9].....	16
Keyboard.....	16
Number [Tag: KP_0 - KP_9].....	16
Character [Tag: KP_A - KP_Z and KP_SPACE].....	16
Symbols [Tag: KP_(SYMBOL)].....	16
Control Keys.....	18
Full Text Search.....	18
Other Commands.....	18
Wake.....	18
Custom Keycode.....	18
App Launching.....	19
Launch App.....	19
Select App.....	19
Driver State.....	19
Get State.....	19
<b>Driver Variables.....</b>	<b>20</b>
Full Text Search [boolean].....	20
Last Selected App [string].....	20
Search Text [string].....	20
App List [list].....	20

<b>Frequently Asked Questions.....</b>	<b>21</b>
What devices does this work with?.....	21
What cool things can i do with this?.....	21
What platforms are supported with this driver.....	21
Does this driver work with Android media players.....	21
The controls don't work with my app.....	21
The device is in lower power mode and can't be woken up.....	22
Apps with non English characters can't be filtered using the Blacklist.....	22
The keyboard isn't working in my app.....	22
Hitting enter on my text search doesn't start the search.....	22
Do you offer showroom discounts?.....	22
I want to try this driver out before buying it?.....	22

## Overview

The Zank Android Remote driver provides IP control your Android TV or Fire TV device. The Driver communicates with your Android TV or FireTV using the Zank remote app. The app launches automatically once its installed so you get very fast access to your Android TV or Fire TV device once it starts up.

The driver can all the usual navigation and transport control as well as having a keyboard for text search. In addition to control it also has direct app launching. The driver will scan your device and provide a list of apps that can be launched directly, no need to use the menu to find the apps any more.



## Features

- IP Control of your Android TV or Fire TV device, no additional hardware required.
- Launch apps directly via a list or by name
- Apps are automatically discovered
- Whitelist or blacklist apps for a tailored app launching list
- Fully tagged for quick programming in Apex
- Full keyboard support for searching
- Direct text entry for apps that don't support full text search (like Netflix)

# Installation

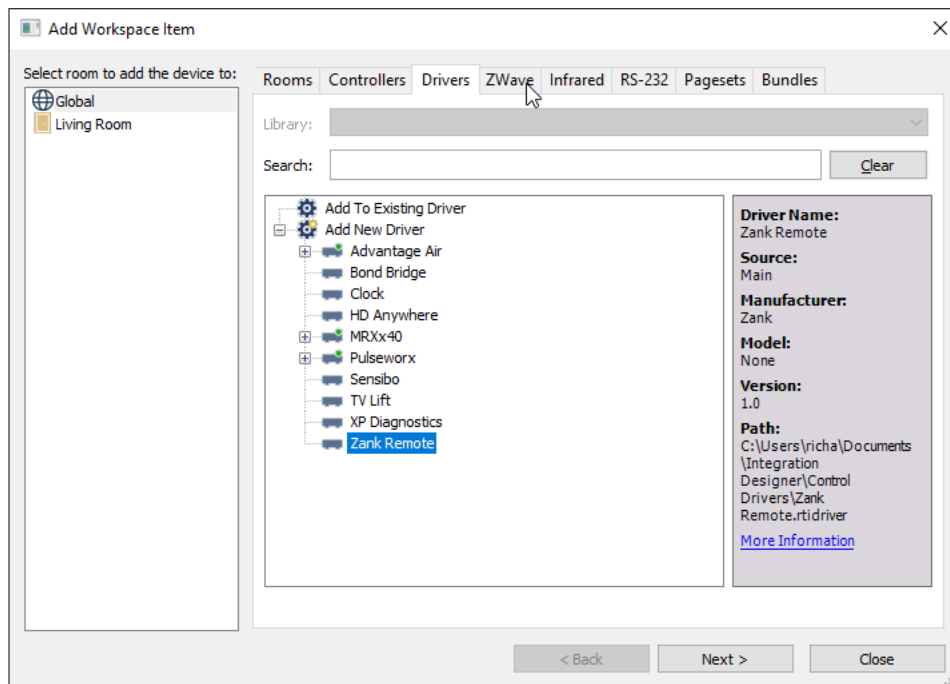
The zip file that included this documentation has the rtidriver file you will need to add. The first step is to download and extract the driver from the zip file. The default location is Documents\Integration Designer\Control Drivers

If you have more than one Android TV or Fire TV device the driver can be added multiple times to your project.

## Add the driver

Click on to the Drivers tab at the top of the Add Workspace Item window. Select the appropriate room to install the driver into and click Next. If required change the driver name and when your done click Add Device. If you have more than one driver to add repeat the process.

The driver is now ready to configure or use.



## Install the Zank App

This driver communicates with your device by way of the Zank app. We don't communicate directly with Android TV so this app needs to be installed and running for the driver to work. There are version on the app on the Android TV Play store as well as the Amazon Store for Fire TV devices.

There is also a version that can be loaded onto your Android phone or Tablet or iPhone device that can be used for control. This is not required, but can be useful for testing.

## **App Extended mode**

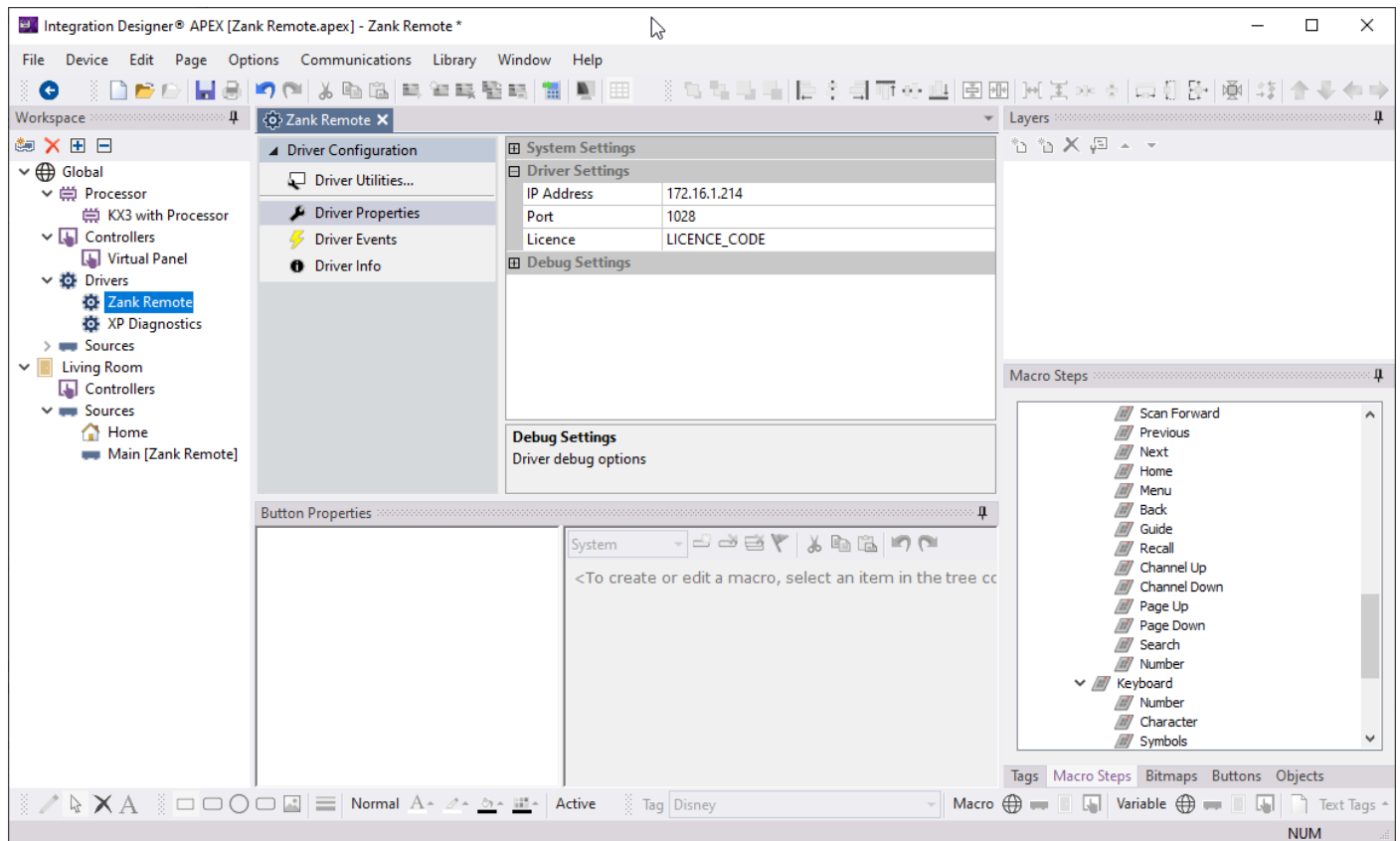
The Driver will attempt to set the extended mode when it launches. The extended mode is required for correct third party integration so it is important that it is correctly selected.

To check if the app is in extended mode, run the Android Remote app on your device. If the button read "Return to default mode" then you have correctly set extended mode and you're ready to use the driver. If instead it reads "Change Mode" please press the button and follow the prompts.



# Configuration

The driver only requires a few items to be configured before it is ready to use.



## Driver Settings

### IP

The IP address of the device where the Zank Remote app is running.

### Port

The port used for Zank remote. The default is 1028.

### Licence

The licence code you obtained from Driver Central. If you have not yet purchased a licence you can do so from

<https://drivercentral.io/platforms/rtd-drivers/audio-video/zank-remote>

## App List Configuration

The driver will automatically fetch all the apps available from the device when it starts up. It makes these apps available for direct launch from a list, but it is likely you may not want every app available on the device

- for example you may not want the Play Store on the list. The following controls allow you to filter the list to better suit your project, see the App Launching section for details. The apps need to be added exactly as they are named and separated by commas.

If you don't want to change the list just leave the fields blank (the use Blacklist option will be ignored if the list is blank).

## **Use Blacklist**

This controls whether you want to filter using a blacklist to eliminate specified apps, or a whitelist to only show the specified apps. When you change it will show the appropriate list below

### **Blacklist**

The blacklist entry will only be shown if the Use Blacklist option is ticked. Add apps to this list, using their exact names, and they will be omitted from the final list. For example, if you don't want the Google Play Store or the Gallery you would use the following entry for the blacklist

Google Play Store,Gallery

The blacklist also supports partial matching, so for example if you used the following

Google

Then every app with Google anywhere in its name would be filtered out.

### **Whitelist**

The whitelist entry will only be shown if the Use Blacklist option is unticked. Add apps to this list, using their exact names, and they will be the items included in the final list. For example, if you only want the Netflix, Apple TV and Disney Plus you would use the following entry for the blacklist

Netflix,Apple TV,Disney+

## App Launching

The driver is capable of directly launching apps, allowing for a very tailored user experience. The driver will discover the apps available and generate a list for direct inclusion in your project. In addition to the list it is also possible to launch the apps directly using a separate function.

### App List

When the driver starts it will automatically gather a list of all the installed apps. These are available directly using a list in conjunction with the App List variable and the Select App function. Note that while all apps are discovered it may be desirable to have them all accessible in the list - for example you may not want the System Upgrade app available. In this case there are two Config options to help you filter the list, App Blacklist and App Whitelist. Their function is described in the Config Settings section.

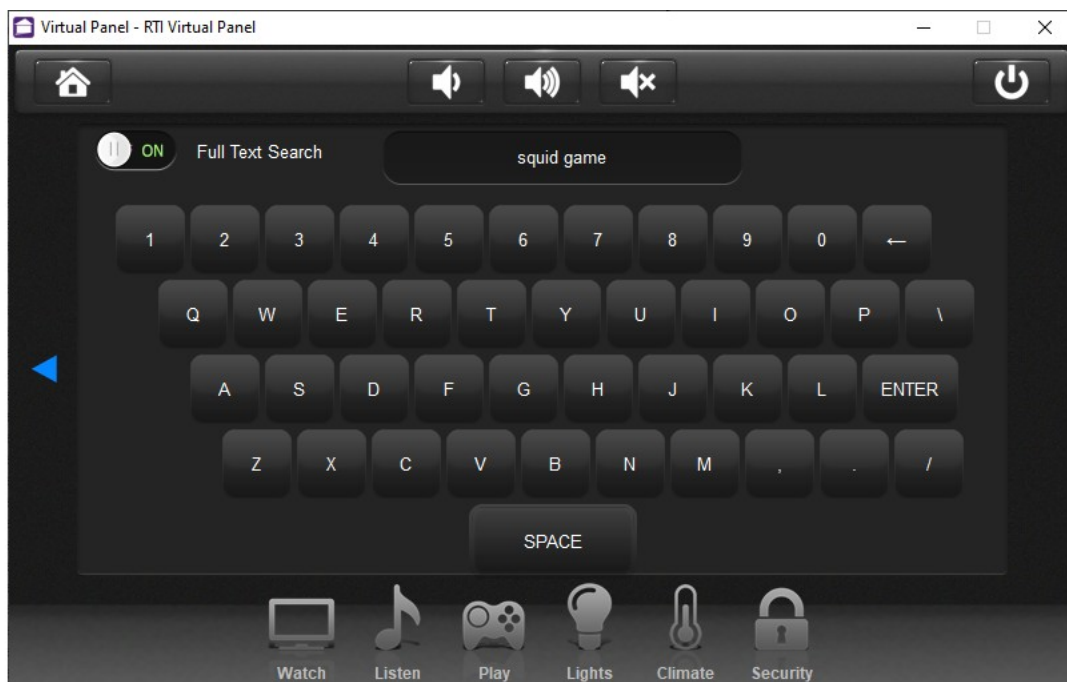
### Direct App Launching

It is also possible to directly launch an app by providing it's name - for example to launch Netflix, you would use parameter Netflix. The names are accessible through the list or you can use the Log Apps function to send the list XP Diagnostics.

## Keyboard Configuration

Many apps and the Android TV or Fire TV itself allow for text searching. A full set of keyboard functions have been included for you to add the ability to search using text entry rather than having to use the on screen keyboard. The type of search available is determined by the app itself and falls into three categories, direct text entry, full text search or no text entry (these apps only allow text entry from an on-screen keyboard).

Please note, for keyboard fields that replace the enter button with search (or a symbol) the enter key from RTI will have no effect. These search fields do not respond to regular keyevents. You can still use the on screen search button by navigating to the button with the dpad. The main Android TV search bar works in this way for example.



### Direct Text Entry

These types of apps expect direct character codes to be sent and typically update their search as you characters. An example of this type of text entry is Netflix. With these apps each character you select will be sent immediately and you will see them appear in screen (depending on the app) as soon as you enter them.

In this mode the backspace key sends a backspace code (which may or may not be recognised by the app) and the enter key sends the enter code.

### Full Text Search

Some apps allow full text search. Typically these apps have a search bar that resembles the Android TV search. For these apps we can send the full text in one hit so when you start typing in the text it won't immediately send it to the Android TV, but instead you it will contain the string in memory and only send it when the enter key is pressed. In this mode you will need to add a text field and attach it the Full Text Search variable so you can see the text being entered.

The backspace key will remove the last character entered and the enter key will send the full string as you have entered it to the Android TV or Fire TV, including the enter key. It is only at this stage, when you press enter, that you will see the text appear on the Android Tv or Fire TV screen.

# Driver Commands

## Driver Commands

### Up [TAG: Up]

This will send an up command. This command has a repeat rate set so you can adjust that to suit the project.

### Down [TAG: Down]

This will send a down command. This command has a repeat rate set so you can adjust that to suit the project.

### Left [TAG: Left]

This will send a left command. This command has a repeat rate set so you can adjust that to suit the project.

### Right [TAG: Right]

This will send a right command. This command has a repeat rate set so you can adjust that to suit the project.

### OK [TAG: OK]

The OK command is the default for select, or the d-pad centre button. There is no repeat set on this command

### Enter [TAG: Enter]

The Enter command is an alternative to the OK command and used in some apps.

### OK Long Press

The OK Long Press command can be used for situation that require a press and hold operation on the OK button. An example would be changing folder contents from movies to tv in Kodi.

### Play/Pause [TAG: Play]

The Play/Pause command will toggle the state between play and pause. Please note there are no native play and pause commands, but it is possible to send a discrete code using the Send Keycode functions (see the Keyboard Section below)

### Scan Back [TAG: Scan Back]

This will send the Scan Back (rewind) command.

### **Scan Forward [TAG: Scan Forward]**

This will send the The Scan Back (fast forward) command.

### **Previous [TAG: Skip Back]**

This will send the The Previous (track back, skip back) command.

### **Next [TAG: Skip Forward]**

This will send the The Next (track forward, skip forward) command.

### **Home [TAG: Home]**

This will send Home command which typically returns you to the main Android menu.

### **Menu [TAG: Menu]**

This will send Menu command which typically returns you to the main Android menu.

### **Back [TAG: Menu]**

This will send Back command which typically returns you on step in the menu.

### **Guide [TAG: Menu]**

This will send Guide command which typically shows the Google Play TV and Movies guide view.

### **Recall [TAG: Prev]**

This will send the Recall (Prev) command. This is typically used top switch between running apps.

### **Channel Up [TAG: Channel Up]**

This will send the Channel Up command

### **Channel Down [TAG: Channel Down]**

This will send the Channel Down command

### **Page Up [TAG: Page Up]**

This will send the Page Up commandThe Page Up command

### **Page Down [TAG: Page Down]**

This will send the Page Up command

## Search [TAG: Search]

This will send the Search command

## Number [TAG: 0 - 9]

This will send the number command, from 0 to 9.

## Keyboard

The keyboard command have some of the same commands from above, but they are treated differently and designed to be used as part of a keyboard page, rather than be used directly. The keyboard function is controlled by the Full Text Search function that can be used to set either full text search, which will let you enter a complete sentence before sending (by hitting enter) or direct entry, that will send each character as you enter it.

Please refer to the Keyboard Configuration section for details on how to correctly setup the keyboard and the how it interacts with the various apps.

## Number [Tag: KP\_0 - KP\_9]

The Number functions will enter the respective number into the search

## Character [Tag: KP\_A - KP\_Z and KP\_SPACE]

The Number functions will enter the respective number into the search

## Symbols [Tag: KP\_(SYMBOL)]

The Number functions will enter the respective symbol into the search. The Tags all use the symbol itself in the name so, for example if you wee looking for the tag for the @ symbol, the tag would be KP\_AT - check the full list below

Parameter	Tag
!	KP_EXCLAMATION
@	KP_AT
#	KP_POUND
\$	KP_DOLLAR
%	KP_PERCENTAGE
^	KP_CARET
&	KP_AMPERSAND



Parameter	Tag
*	KP_STAR
(	KP_LEFT_BRACKET
)	KP_RIGHT_BRACKET
`	KP_GRAVE
~	KP_TILDE
-	KP_MINUS
+	KP_PLUS
_	KP_UNDERSCORE
=	KP_EQUALS
[	KP_LEFT_SQUARE
]	KP_RIGHT_SQUARE
{	KP_LEFT_BRACE
}	KP_RIGHT_BRACE
;	KP_SEMICOLON
:	KP_COLON
'	KP_APOSTROPHE
&	KP_QUOTE
,	KP_COMMA
.	KP_PERIOD
/	KP_SLASH
?	KP_QUESTION
</td>	KP_BACKSLASH
Space	KP_SPACE

## Control Keys

The control keys are for the various modifier or special keys. There are two keys in this section and they are detailed below. Note that these keys work differently depending on the Full Text Search setting.

If Full Text Search is on, then the enter key will send the entire string that has been entered, if Full Text Search is off then it will immediately send an enter code.

If Full Text Search is on, then the backspace key will send the remove the last character typed in the current text entry and no code will be sent to the Androids TV or Fire TV. If Full Text Search is off then it will send a backspace code immediately.

Name	Tag
Enter	KP_ENTER
Backspace	KP_BACK

## Full Text Search

The Full Text Search function controls how the keyboard page works - check the Keyboard Configuration page for more details.

If the Full Text Search is on then the keys will add to a string that won't be sent until the enter key is pressed. If Full Text Search is off then the keys pressed will be sent to the Android TV or Fire TV immediately.

## Other Commands

The Other commands functions allow you to trigger lesser used command and also includes the ability to trigger a custom command.

## Wake

The wake command can be used to wake up your device from the screensaver.

## Custom Keycode

The Custom Keycode function allows you to send any available Android keycode directly to your device. Each app controls what keycodes it will respond to, and the standard commands should suit the vast majority of the commands you need. If you do need a custom keycode then you can use this function to send it.

NOTE: the method for sending these codes is quite a bit slower, often with up to a 1 second delay, so it should be used sparingly.

The keycodes are in the format `KEYCODE_(CODE)`, and this function only requires the `CODE` part to be used. For example if you wanted to send a stop command the full code would be `KEYCODE_MEDIA_STOP` and you would use `MEDIA_STOP` as the parameter to this function.

The keycodes are available at <https://developer.android.com/reference/android/view/KeyEvent>

## **App Launching**

App launching can be handled in one of two ways. One option is to use a list, which is populated automatically with the apps discovered on your device. The other option is to use the name of the App to launch. Both options are detailed below.

### **Launch App**

The Launch App function accepts a string that is the name of the app - for example Netflix. For this to be successful the app needs to be installed on your Android TV or Fire TV device and discovered by the driver. Anything that appears in the app list (see the Select app function below) can be used. If you use a name that hasn't been discovered then nothing will happen.

### **Select App**

The Select App function is used in conjunction with the app list. This is the selected index for the list and use for command attached to the list.

## **Driver State**

### **Get State**

The get state command is used to gather data about the driver for diagnostic purposes. It should not be used in a normal project.

## Driver Variables

### Full Text Search [\[boolean\]](#)

The Full Text Search provides feedback for the Full Text Search function. If this variable is true then the Full Text Search is enabled and if it false, direct entry is enabled. Please refer to the Keyboard Configuration page for more details.

### Last Selected App [\[string\]](#)

The Last Selected App contains the name of the last app you selected from the App List. An example of this might be Netflix.

### Search Text [\[string\]](#)

The search Text variable hold the current string you have entered via the keyboard if Full Text Search is on. If Full Text Search is off this will be empty and wont change.

### App List [\[list\]](#)

The App List contains all of the discovered apps from your Android TV or Fire TV. If this is attached to a list object you can directly launch the named app just by selecting it from the list.

## Frequently Asked Questions

### What devices does this work with?

This driver is tested to work with

- AirTV
- Amazon Fire TV
- Chromecast with Google TV
- Nvidia Shield
- Xiaomi MiBox
- Foxtel Now
- Other Google / Android TV Boxes

It will also work on other Android TV boxes as long as it can run Zank Remote.

### What cool things can i do with this?

Quick app launching command can be tied into buttons to launch any installed app like Netflix, Disney+, Youtube and more.

keyboard allows for text entry.

### What platforms are supported with this driver

The driver requires you to download and install the Zank Remote app. Currently the app is available on the Google Play Store (for Android and Android TV) and the Amazon App store, so all Android TV and Amazon FireTV's are supported

### Does this driver work with Android media players

The App does work with straight Android media players (that is, not Android TV) but the apps on Android were not designed to work with regular mouse and keyboard codes so most of the apps will not work correctly. Android TV is designed to work with remotes and has a separate app store with apps made specially for use on a TV with a remote and for that reason we would recommend avoiding a straight Android media player and instead using Android TV.

### The controls don't work with my app

If you are using Android, rather than Android TV, it is likely that most of the apps will not work correctly as they were designed for a touchscreen control (from a phone or tablet) and not for mouse and keyboard control. An Android TV or Fire TV media player is the best option as these apps are specifically designed for this type of control.

## **The device is in lower power mode and can't be woken up**

The best way to avoid this is not to let the device enter low power mode. This can be performed by doing the following.

- Select Settings
- Select Device Preferences
- Select Energy Saver
- Select Turn Off Display
- Change the setting to Never

## **Apps with non English characters can't be filtered using the Blacklist.**

The pattern matching does only work with standard ASCII characters, but you may be able to correctly filter the apps out using partial matching. Check the Blacklisting section of the guide for details.

## **The keyboard isn't working in my app**

We have provided two different forms of keyboard, direct text and a full text version, but unfortunately not all apps support keyboard codes, but instead are locked down to their own keyboards in the app. This may be the case for the app you are having trouble with, but make sure to try both the full text search and also the direct entry method.

## **Hitting enter on my text search doesn't start the search**

In some cases, like the main Android TV search, there is no equivalent key to send to start the search. In these cases you will need to use the d-pad to move to the search button and press ok on that to get started.

## **Do you offer showroom discounts?**

We offer dealers a free showroom licence for demonstration and educational purposes. See link below for T&C's and signup procedure.

[Chowmain Dealer Showroom FAQ](#)

## **I want to try this driver out before buying it?**

All Chowmain drivers come with a 90 day trial, no registration required.