

Screen Control for MediaPortal

Version 1.9.1

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1. Summary

ScreenControl is a MediaPortal plugin to switch between different screen modes and resolutions, to control your media center with voice commands and to adjust the brightness of connected displays and/or to jump a screen after a defined time period.

Please be aware, that the brightness functionality is depending from your video card and/or driver capabilities. If implemented hardware control routines are not supported, this part of the plugin cannot work correctly.

This plugin can be configured for 2 display modes, Background and Menu Mode.

Background Mode: This type does not have a menu entry. This is useful, when you only include some specific properties into your existing skin files.

Menu Mode: This type shows a menu in your home or plugin menu and opens a new window to display specific configuration options.

2. Requirements

This plugin requires MediaPortal v1.3.0 or higher (for more information see the homepage <http://www.team-mediaportal.com>) and a capable graphic card or graphic driver.

3. Installation

To install the ScreenControl plugin, please run the installer “ScreenControl.mpe1” or, if you want to manually install the plugin, follow the described steps:

- Step 1: unzip the file “ScreenControl.zip” to a temporary directory and open this directory
- Step 2: navigate to folder “*ScreenControl\Release\Plugins\Windows*”
- Step 3: copy all files to the MediaPortal plugin directory, e.g. “*c:\program files\team mediaportal\plugins\windows*”
- Step 4: navigate to folder “*ScreenControl\Release\Skin\Default\Media*”
- Step 5: copy all files and directories to your MediaPortal skin folder, e.g. “*c:\programdata\team mediaportal\mediaportal\skin\default\media*”
- Step 6: navigate to folder “*ScreenControl\Release\Language\ScreenControl*”
- Step 7: copy all files to your MediaPortal language folder, e.g. “*c:\programdata\team mediaportal\mediaportal\language\ScreenControl*”
- Step 8: navigate to folder “*ScreenControl\Release\Skin\Default*”
- Step 9: copy all files and directories to your MediaPortal skin folder, e.g. “*c:\programdata\team mediaportal\mediaportal\skin\default*”

3.1. Preparation for Menu Mode version

If you want to use the Menu Mode version, please open your MediaPortal Configuration Utility, go to “Plugins”, select “Screen Control” in the list of plugins and press button “In Home” or “In Plugins” for your desired location. Now you can start MediaPortal and open the ScreenControl window using a menu entry.

3.2. Preparation for Background Mode version

If you want to use the Background Mode version, open your MediaPortal Configuration Utility, goto “Plugins” and open the Screen Control configuration dialog. Navigate to tab “Settings” and check the option “Enable background mode”. To open the configuration window, it is required to edit your skin file(s).

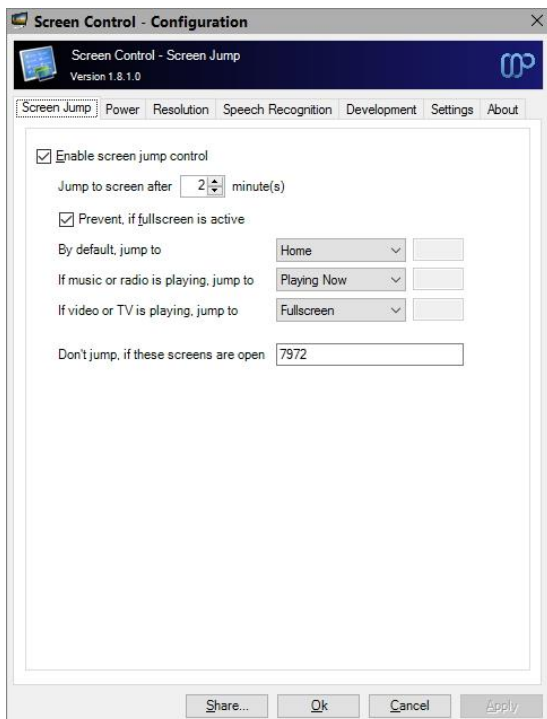
add a button to your skin file to open the Screen Control window

- Step 1: go to your skin directory and find the window, where you want to include the information, e.g. myhome.xml
- Step 2: open it with a text editor
- Step 3: include a control section in the following form:
- ```
<control>
<description>Screen Control</description>
<type>button</type>
<id>2</id>
<label>Screen Control</label>
<hyperlink>7975</hyperlink>
</control>
```
- Step 4: save the file and refresh/reload the window
- Step 5: after pressing the button, the window screencontrol.xml opens

## 4. Configuration

ScreenControl has specific configuration options.

### 4.1. Screen Jump Settings



**Enable screen jump control:** Switch this option on, if you would automatically jump to a defined target screen.

**Timeout:** Enter the timeout value in minutes, after this period the target screen will opened. Valid values are 1 to 60 minutes.

**Prevent, if fullscreen is active:** If this option is turned on, none of the defined windows will opened until any fullscreen windows are closed.

**By default, jump to:** Select or enter the default target screen here. Valid selections are “Home”, “Basic Home”, “Playing Now”, “Visualisation”, “Fullscreen” and “Self defined...”. If you select the last option, you must enter the window ID in a textbox separately.

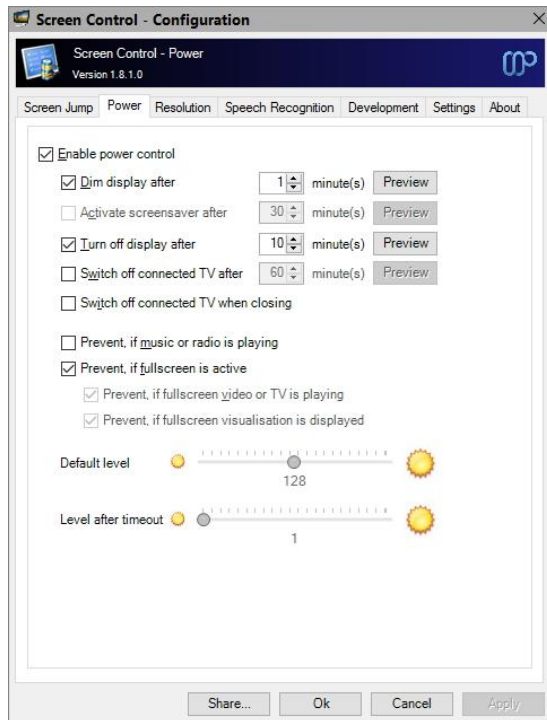
**If music or radio is playing, jump to:** Select or enter the target screen, this will be opened if music or radio is playing. Valid selections are “Home”, “Basic Home”, “Playing Now”, “Visualisation”, “Fullscreen” and “Self defined...”. If you select the last option, you must enter the window ID in a textbox separately.

**If video or TV is playing, jump to:** Select or enter the target screen, this will be opened if video or TV is playing. Valid selections are “Home”, “Basic Home”, “Playing Now”, “Visualisation”, “Fullscreen” and “Self defined...”. If you select the last option, you must enter the window ID in a textbox separately.

**Don't jump, if these screens are open:** Here you can define up to 10 screens, please separate each screen value by semicolon. If any of these screens is open, screen jump is prevented.

For a list of main MediaPortal screen IDs, please take a look [here](#).

## 4.2. Power Settings



**Enable power control:** Switch this option on, if you would control your display/connected TV device power settings.

**Dim display / Activate Screensaver / Turn Off:** Enter the timeout value in minutes, after this period the brightness level of the screen changed, the screensaver will activated and/or the display turns off. Valid values are 1 to 60 minutes. Use according buttons "Preview" to check your settings.

**Note:** To use the screensaver functionality, it is required to setup the screensaver type in your Windows control panel before. It is highly recommended to select a high timeout value.

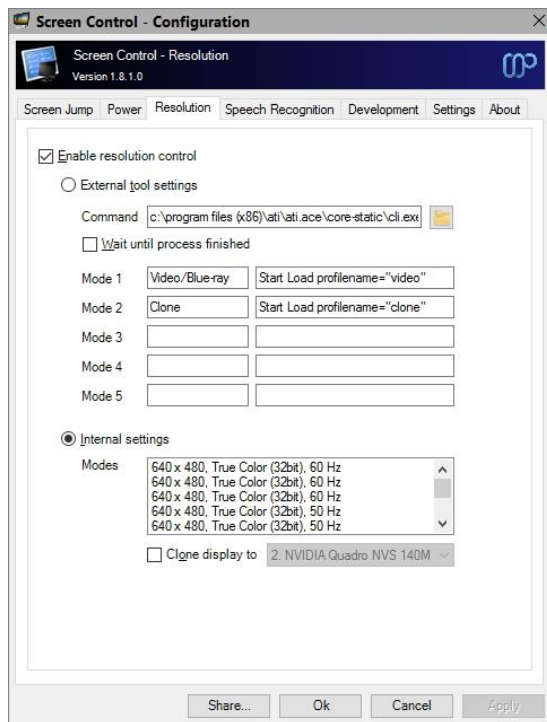
**Prevent, if music or radio is playing:** If this option is turned on, the brightness will not changed until music or radio is stopped.

**Prevent, if fullscreen is active:** If this option is turned on, the brightness will not changed until any fullscreen windows are closed. If you want to control brightness changes more precise, please use the options "Prevent, if fullscreen video or TV is playing" or "Prevent, if fullscreen visualisation is displayed".

**Default Level:** Default brightness level, valid values are 1 to 256.

**Timeout Level:** Brightness value, when the timeout is reached and no user interaction (mouse or keyboard) was detected. Valid values are 1 to 256.

## 4.3. Resolution Settings



**Enable resolution control:** Switch this option on, if you would enable the resolution change functionality.

**External tool settings:** Select this to control your display resolution using installed 3<sup>rd</sup> party applications (e.g. ATI Catalyst™ Control Center).

**Wait until process finished:** If this option is turned on, the plugin will wait until started resolution change process is finished.

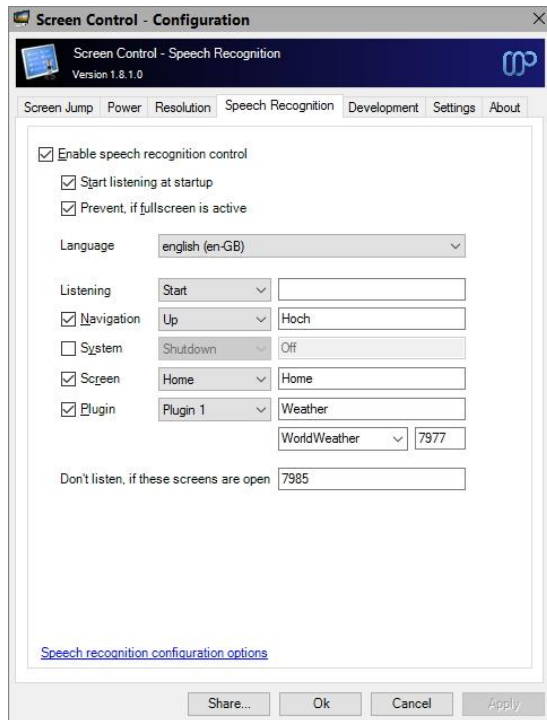
**Executable file:** Enter here the path and name of the 3<sup>rd</sup> party executable file.

**Mode 1 – 5:** Here you can define a description and required arguments for the 3<sup>rd</sup> party application. For working solutions please refer to chapter “Working Solutions for Resolution Change Configuration”.

**Internal settings:** Select this to control the display resolution using OS internal routines, available modes are shown below.

**Clone display:** Select this to clone your primary screen to selected display at startup.

## 4.4. Speech Recognition Settings



**Enable speech recognition control:** Switch this option on, if you would control your media center with voice commands.

**Start listening on startup:** Switch this option on, if you would enable the listening mode on startup.

**Prevent, if fullscreen is active:** If this option is turned on, none of the defined voice commands can be used until any fullscreen windows are closed..

**Language:** Please select your native language here to improve the speech recognition detection.

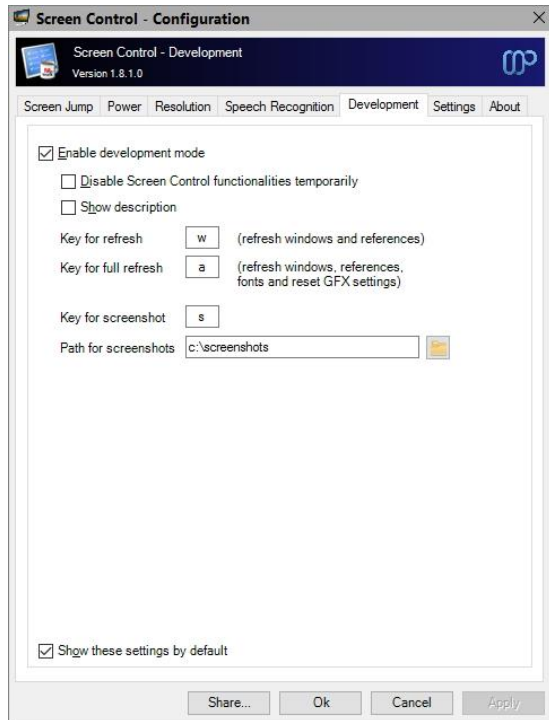
**Commands:** Please enter here the voice commands for each section to start the defined action.

**Don't listen, if these screens are open:** Here you can define up to 10 screens, please separate each screen value by semicolon. If any of these screens is open, speech recognition is prevented.

## 4.5. Development Settings

The configuration dialog allows you to configure some expert settings. Because these functionalities are normally not for end users, it is disabled by default. The appropriate options are hidden and will be shown only, if you check the appropriate setting before or when the Shift and the “Config” button are pressed simultaneously.

These functionalities can be used to make changes to skins and to refresh screens inside MediaPortal without restarting it.



**Enable development mode:** Switch this option on, if you would use these extended functionalities.

**Disable Screen Control functionalities temporarily:** Switch this option on, if you would temporarily disable all functionalities of this plugin (ScreenJump, Speech Recognition, Power Settings).

**Show description:** Switch this option on, if you want to have a visible feedback and mapped keys, if the development mode is enabled.

**Key for refresh:** Enter the key, which will be used for normal MediaPortal skin refresh.

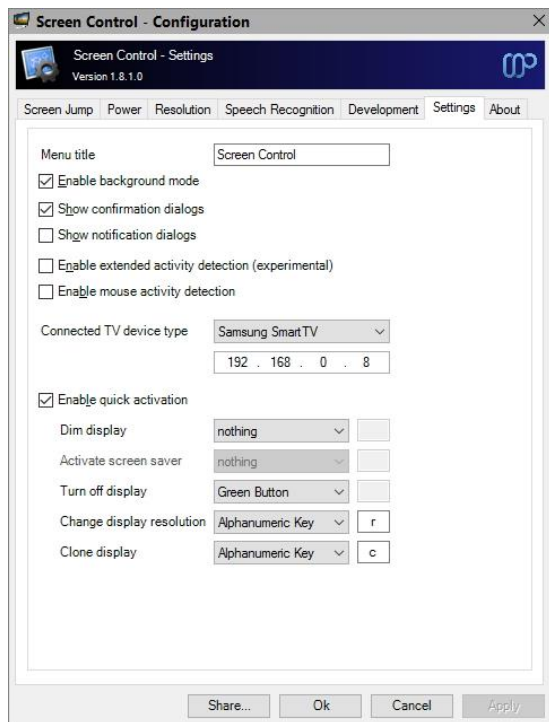
**Key for full refresh:** Enter the key, which will be used for full MediaPortal skin refresh (including fonts and reset of GFX settings).

**Key for screenshot:** Enter the key, which will be used to create screenshots.

**Path for screenshots:** Enter here the path, where screenshots will be saved. By default, the location is the root of your first hard disk.



## 4.6. Settings



**Menu Title:** Enter here the menu title.

**Enable background mode:** Enables or disables the background mode.

**Show confirmation dialogs:** If this option is turned on, a confirmation dialog opens before starting a button action.

**Show notification dialogs:** If this option is turned on, notification dialog opens after starting a button action.

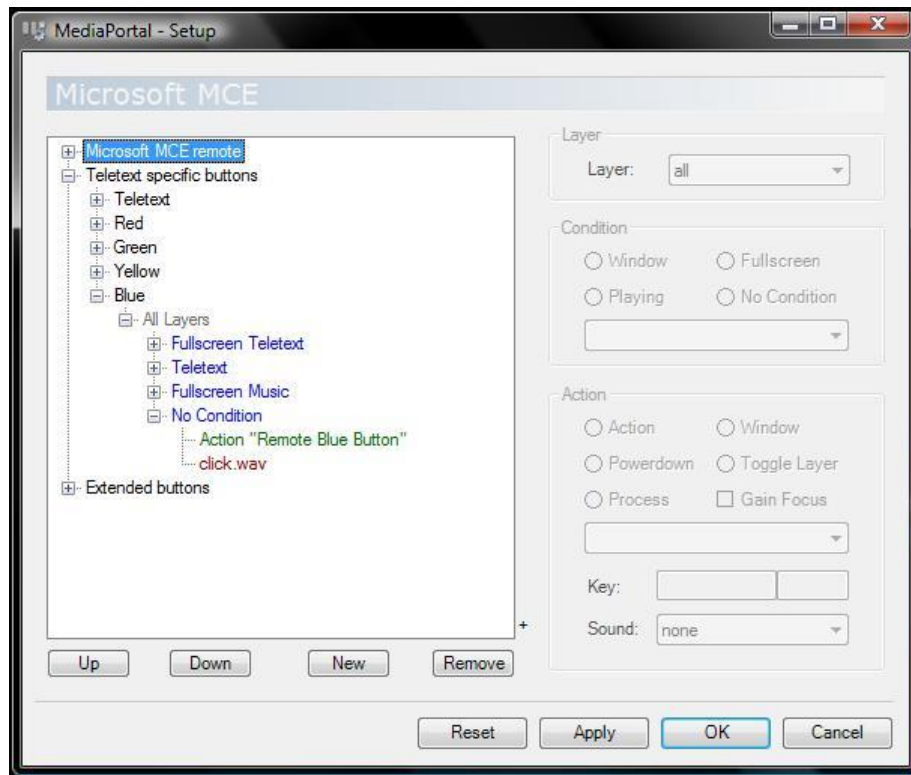
**Enable extended activity detection:** Switch this option on, if you identify problems regarding key detections. It can be useful, if you had installed “IR Server Suite” or other tools, which simulate key and mouse events.

**Enable mouse activity detection:** Switch this option on to support mouse detections.

**Enable quick activation:** Switch this option on, if you would control plugin functionalities directly using a keyboard or remote control.

## 5. Remote Control Configuration

If you have switch on the quick activation mode inside the ScreenControl configuration dialog, the selected activation keys must be enabled in the remote section. For this, please select “Remote” and press button “Mapping”.

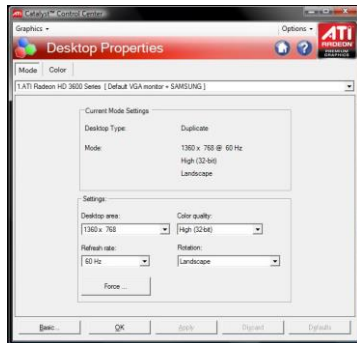


Open the configuration for your selected quick activation button (e.g. blue/green/red/yellow button) inside the tree and ensure, that “No Condition” is set to the required option, e.g. for the blue button action “Remote Blue Button” must be selected.

## 6. Working Solution for 3<sup>rd</sup> Party Resolution Configuration

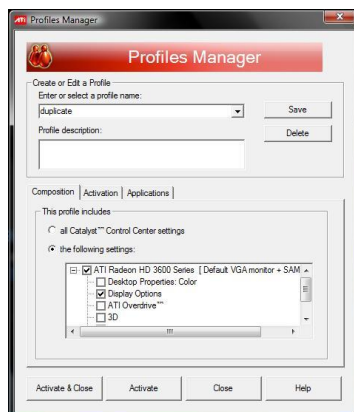
For ATI Cards (e.g. Radeon cards) the following solution works:

- **Step 1:** install the latest ATI Catalyst™ Driver and ATI Catalyst™ Control Center
- **Step 2:** open the ATI Catalyst™ Control Center, select “Graphics” and open the dialog “Desktop Properties”

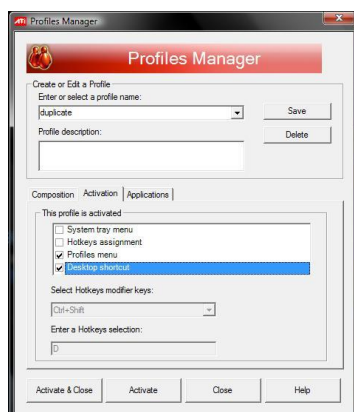


**Step 3:** please define your settings (resolution, color quality, refresh rate and rotation) for your profile

- **Step 4:** test your settings by clicking button “Apply”
- **Step 5:** select “Options/Profiles” and open the dialog “Profile Manager”



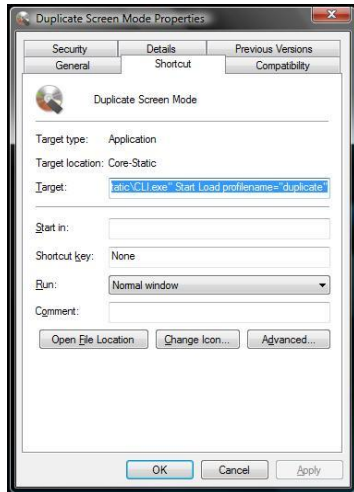
**Step 6:** enter a valid profile name (and optional a profile description), click tab “Composition” and select all required settings for this profile



**Step 7:** click tab “Activation”, check the option “Desktop Shortcut” and save the profile by clicking the button “Save”

- **Step 8:** validate, if a desktop shortcut for this profile was created

- **Step 9:** repeat steps 2 – 8 for the second profile
- **Step 10:** start the MediaPortal Configuration Utility and open the configuration dialog for ScreenControl
- **Step 11:** open the tab “Resolution” and enter the executable file for ATI Catalyst™ Command Line Tool (by default the path is “C:\Program Files\ATI Technologies\ATI.ACE\Core-Static\CLI.exe”) in field “Executable file”
- **Step 12:** enter a valid description in field “Mode 1 Description”
- **Step 13:** go to your desktop, right click the desktop shortcut for profile 1 and click “Properties”



**Step 14:** copy the arguments from “Target” into the clipboard (by default *Start Load profilename=<profilename>*), switch to the configuration dialog and paste it into the field “Mode 1 Arguments”.

*<profilename>* is the profile name from step 6

- **Step 15:** repeat steps 12 – 14 for Mode 2
- **Step 16:** save the configuration for ScreenControl and close MediaPortal Configuration Utility

## 7. Settings and Profile Sharing

By default, all plugin related settings will be saved locally inside the pre-configured client data directory of MediaPortal. In addition to that, ScreenControl allows sharing settings and profile information among clients. This way you have to define your various plugin settings, credentials, etc. only once and accordingly every client can access this data. Before starting with settings and profiles sharing, please observe the following hints and requirements.

- In principle all local and network storages or cloud services (e.g. OneDrive, Dropbox, SugarSync) can be used for sharing. Before using this feature, possible device or service specific configurations should be checked to prevent access or synchronization problems later.
- The current implementation does not support concurrent read or write operations. Also, the synchronization or latency behavior of a device or service cannot be influenced.
- When using a shared network folder, the device must be available and the operating system must know the credentials to access the device.
- When using an OneDrive folder, an internet connection must be established and the synchronization tool must be installed and running across all devices. Additionally the selected OneDrive folder must be available offline (Windows 8 and below only) or enabled as a sync folder.
- When using a Dropbox folder, an internet connection must be established and the synchronization tool must be installed and running across all devices. Additionally the selected Dropbox folder must be enabled as a selective sync folder.
- To share passwords or keys correctly, all synchronized devices must be in the same network domain or workgroup.

The button “Share” inside the dialog allows the definition of the central configuration storage path. Enter this path information in every client’s setup to ensure, that each clients will use the same settings.

Depending on the selection, the button “Ok” will use the central file storage as defined (when sharing is enabled) or the pre-configured client data directory (when sharing is disabled). The button “Apply” acts in the same way without closing the configuration dialog itself.

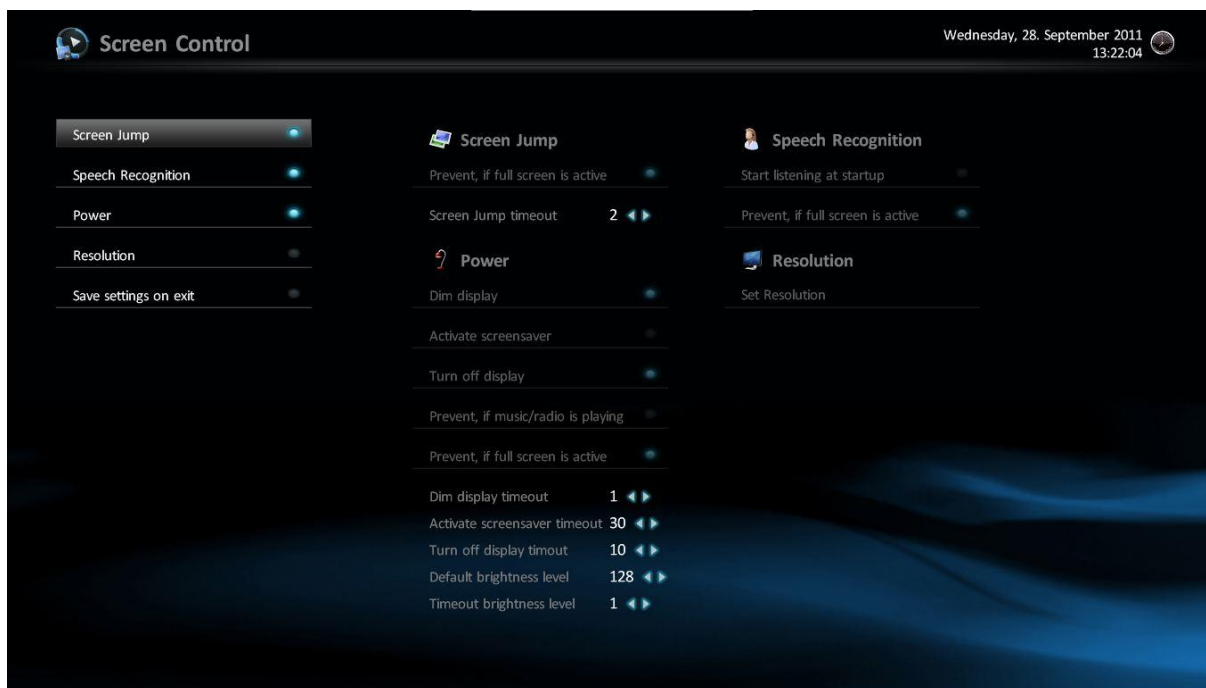
## 8. Properties

This plugin offers some properties, which can be used in skin files. See the following table for more information.

Property Name	Return value
#ScreenControl.DevelopmentModeSettings	Shows the configured development settings (e.g. keys)
#ScreenControl.SpeechRecognitionModeState <sup>1</sup>	Shows an image, if speech recognition is listening for voice commands
#ScreenControl.SpeechRecognitionModeAudioLevel	Shows the current speech recognizer audio level (for debugging purposes)
#ScreenControl.SpeechRecognitionModeResult	Shows the detected voice command (for debugging purposes)

<sup>1</sup>: valid value is "screencontrol\_listening.png"

## 9. Screenshots



Screen Control configuration screen example

## 10. Version History

- 0.1.0 – Initial Release
- 0.2.0 – First release to community
- 0.2.2 – Bug fixing
- 0.2.3 – Bug fixing for FPS bug
- 0.3.0 – Screen Jump Control functionality added
- 0.3.5 – Screen Jump Control and Brightness functionality enhancements added
- 0.4.0 – Resolution Control functionality (merge of experimental ScreenMode plugin functionalities) added
- 0.4.1 – Display Turnoff functionality added
- 0.4.2 – Development functionalities added (by default hidden)
- 0.4.5 – Quick Activation functionality added
- 0.5.0 – Screensaver functionality added
- 0.5.1 – Bug fixing
- 0.5.5 – Screenshot functionality added
- 0.5.6 – Exception/Error handling changed
- 0.5.7 – Alphanumeric activation keys added
- 0.5.8 – Extended Activity Detection mode, option for Mouse Activity Detection added
- 0.5.9 – Screen Jump Blacklist Control functionality added, Bug fixing
- 0.6.0 – Code optimization after platform change (Visual Studio/Team Foundation Server 2010)
- 0.6.1 – Changes to context menus
- 0.7.0 – Speech recognition functionality added
- 0.7.1 – Bug fixing for brightness and turnoff functionality
- 0.7.4 – Support for OnlineVideo plugin added
- 0.7.5 – Screensaver startup parameter changed
- 0.7.6 – Version/Subsystem control functionalities added
- 0.7.7 – Speech prevention list added, last improvements for MediaPortal v1.2.0
- 0.8.0 – add GUI configuration window
- 1.0.0 – final version
- 1.0.1 – add support to control Samsung SmartTV devices, change compatibility flags to support MediaPortal v1.3.0
- 1.0.2 – add option to switch off connected TV device when MediaPortal is closing, changes to configuration window
- 1.0.3 – source maintenance, cumulative updates
- 1.1.0 – major source maintenance, remove of ScreenControl.Core.dll dependencies
- 1.1.1 – minor improvements for MediaPortal v1.3.0
- 1.2.0 – rework of speech recognition and resolution functionalities, timer reset added, if a voice command has been recognized
- 1.2.1 – fix for timer specific issues in case threaded plugin loading is enabled
- 1.2.2 – change compatibility flags to support MediaPortal v1.5.0
- 1.2.3 – refactoring of plugin startup code, code cleanup, internal maintenance/test release
- 1.3.0 – several performance improvements
- 1.3.1 – change compatibility flags to support MediaPortal v1.6.0
- 1.4.0 – rework to support updated plugin framework v1.1.0
- 1.5.0 – change target framework to .NET 4.0, change compatibility flags to support MediaPortal v1.7.0, support for updated plugin framework v1.2.0

- 1.5.1 – fix for wrong speech recognition handler initialization in case fallback culture cannot be detected
- 1.5.2 – change compatibility flags to support MediaPortal v1.8.0
- 1.5.3 – rework update mechanism, changes to support plugin framework 1.3.0
- 1.6.0 – change compatibility flags to support MediaPortal v1.9.0
- 1.6.1 – internal test release
- 1.6.2 – minor enhancements, change compatibility flags to support MediaPortal v1.10.0
- 1.6.3 – architectural enhancements, rework of speech recognition
- 1.7.0 – rework of configuration dialog
- 1.8.0 – cryptographic routines updated, functionality to share settings and profiles added, support for MediaPortal v1.12.0
- 1.8.1 – rework of message management routines, improvements to sharing functionality, maintenance
- 1.9.0 – support for plugin framework v1.4.0, change compatibility flags to support MediaPortal v1.13.0
- 1.9.1 – maintenance release, change compatibility flags to support MediaPortal v1.14.0

## 11. Skin Changes

- 1.1.1 – change button type of ID 5, 10, 11, 20, 21, 22, 30, 31, 32, 33, 37, 38, 41, 50 to checkbox

## 12. Known Limitations

- If MediaPortal is not in fullscreen mode or the active foreground window, Power functions are disabled.
- Currently only english and german speech recognition languages are supported completely.

## 13. Copyright Information

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