

Dynamic Refresh Rate

This section is only visible in expert mode.

This option was renamed in MP 1.1.0 from Refresh Rate to Dynamic Refresh Rate.

Dynamic Refresh Rate - Theory

First you need to understand the theory before you use this option.

A video file contains roughly 24, 25 or 30 frames per second (FPS). Your HTPC has a video card which produces a signal to your TV or monitor. This signal in theory can be anything from 24, 25, 30, 50, 60, 75 or even 100Hz. i.e. 60Hz means the signal is refreshed 60 times a second. If there is a mismatch in the FPS from your media file and the Hz signal to your TV or monitor, this is most likely to be visible as judder in the video. Dynamic Refresh Rate Changer attempts to address this by synchronising the output of the video with the rate of the TV

Available modes*	TV Supported INPUT				
	Name	Width	Height	Frequency	FPS
<input type="checkbox"/>	720p24	1280	x 720	24hz	24
<input type="checkbox"/>	720p25	1280	x 720	25hz	25
<input type="checkbox"/>	720p30	1280	x 720	30hz	30
<input type="checkbox"/>	720p50	1280	x 720	50hz	50
<input type="checkbox"/>	720p60	1280	x 720	60hz	60
<input type="checkbox"/>	1080p24	1920	x 1080	24hz	24
<input type="checkbox"/>	1080p25	1920	x 1080	25hz	25
<input type="checkbox"/>	1080p30	1920	x 1080	30hz	30
<input type="checkbox"/>	1080p50	1920	x 1080	50hz	50
<input type="checkbox"/>	1080p60	1920	x 1080	60hz	60
<input type="checkbox"/>	1080i50	1920	x 1080	50hz	25
<input type="checkbox"/>	1080i60	1920	x 1080	60hz	30

Media Sources Info	
Type	FPS
PAL	25
SECAM	25
NTSC	29,97
BluRay/MKV	24
BluRay/MKV	23,976
Cable / Sat.	25
AVI	30

** Check the manual of your TV screen for capabilities!*
 p = progressive
 i = interlaced

CONFIGURATION SCREEN - DYNAMIC REFRESH RATE

Type	Framerates	Refreshrate**
CINEMA	23.976; 24	
PAL	25	
NTSC	29.97; 30	
TV	25	

Look for the best Option
Look for the best Option
Look for the best Option
Look for the best Option

*If more than one refreshrate is possible, choose the highest refreshrate + resolution (progressive).
 This will give the smoothest image.*

** If there is no "Perfect !" match, you must choose the best option your self.

i.e. Cinema/24fps; look for a closes match of a multiple of 24.

Required	Available	Calculation	Match closest to 100%
1 x 24 = 24	30	24 : 30 x 100	80%
2 x 24 = 48	50	48 : 50 x 100	96% <<< Best option
3 x 24 = 72	60	72 : 60 x 100	120%

Options

You may also change this settings in the MediaPortal Interface, see [Refresh Rate Settings](#).

Dynamic Refresh Rate

Dynamic Refresh Rate Setup

Dynamic Refresh Rate Changer is a feature that works by inspecting the media file going to be played and dynamically changes the refresh rate of the display to a multiple of the video frame rate. This will eliminate any judder or jerky video playback you might have.

NOTE! It is important that your display device (eg. TV) is able to utilize these different refresh rates. eg. 24hz is often called 24p mode.

Keep the action fields empty and an internal refresh rate change will be done. Otherwise specify a command line with parameters for batch file, powerstrip etc.

- Enable Dynamic Refresh Rate Control. Use device reset.
 Notify (popup) on refresh rate change. Force refresh rate change.

Name	Frame rate(s)	Refresh rate	Action
CINEMA	23.976;24	24	
PAL	25	50	
HDTV	50	50	
NTSC	29.97;30	60	

Use default refresh rate:

[more info in the wiki ...](#)

- **Enable Dynamic Refresh Rate Control**
Switches Dynamic Refresh ON or OFF
- **Use Device Reset**
If the refresh rate changing method provokes a device reset, enable this option.
- **Notify (popup) of refresh rate change**
You can specify if you wish to be notified of change of refresh rate
- **Force Refresh Rate Change**
Disable detection of current refresh rate and force change to specified rate
- **Use default refresh rate**
When playback of a media file is stopped, the refresh rate will go back to original refresh rate before changing.
Options are all refresh rates defined in the list above.

Note: When you use a Multi Seat setup and use RTSP for LiveTV, the Dynamic Refresh Rate doesn't work! More info about this can be found in the [Known Issues Wiki](#).

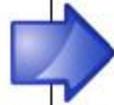
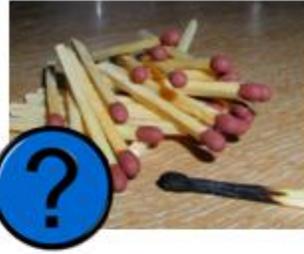
Note 2: For Dynamic Refresh Rate to work on actual discs, you have to enable the setting **Use MediaInfo for DVDs** see [DVD Player](#).

As of MediaPortal 1.3 Final, the default refresh rates have been optimized for Blu-ray playback, NTSC & ATSC. The default settings are:

Name	Frame rate(s)	refresh rate
CINEMA	23.976	23
CINEMA24	24	24
PAL	25	50
PALHD	50	50
NTSC	29.97	59
NTSCHD	59.94	59
ATSC	30	60
ATSCHD	60	60

TV Modes Tool

A TV modes tool is available to calculate settings for refresh rate changer based on display capabilities of the TV you are using. (Thanks to *Edterbak*)



<u>Inspect Media File (Source)</u>	<u>Find The Best Match</u>	<u>Change The Refreshrate Of The HTPC*</u>
23,976 (/24) fps (BluRay/MKV)	$23,976 \times 1 = 23,976$ (/24) Hz $23,976 \times 2 = 47,952$ (/48) Hz $23,976 \times 3 = 71,928$ (/72) Hz	24 Hz (1080p24) 50 Hz (1080p50) 60 Hz (1080p60)
25 fps (PAL)	$25 \times 1 = 25$ Hz $25 \times 2 = 50$ Hz	25 Hz (1080i25) 50 Hz (1080p50)
29.97 (/30) (NTSC)	$29,97 \times 1 = 29,97$ (/30) Hz $29,97 \times 2 = 59,94$ (/60) Hz	29,97 Hz (NTSC) /30 Hz (1080p30) 60 Hz (1080p60)
25 (TV/Cable)	$25 \times 1 = 25$ Hz $25 \times 2 = 50$ Hz	25 Hz (1080i25) 50 Hz (1080p50)

Best Match

*The available refresh rates depend on the capabilities of your TV screen. Possible is: 23.976, 24, 25, 29.97, 30, 50 and 60Hz
 Read the manual of your TV to make sure you select the correct input modes.

DOWNLOAD TV MODES TOOL (to calculate refresh rates)

- [//forum.team-mediaportal.com/mediaportal-1-talk-45/automatic-refreshrate-changer-44338/index62.html](http://forum.team-mediaportal.com/mediaportal-1-talk-45/automatic-refreshrate-changer-44338/index62.html)

Further Information

- Troubleshooting > [Stuttering Playback](#)