

Setting 50Hz Output frequency

What is Hz?

“Hz” is the abbreviation for Hertz, which refers to the refresh rate of a video signal. In other words: the number of times per second that a new video frame is generated by Hippotizer.

Another term thrown around a lot with the refresh rate is “p” and “i”. These are short for “Progressive” and “Interlaced” respectively. A progressive signal (so 1920 x 1080p 50Hz or simply 1080p 50 for example), is sending an entire video frame 50 times a second. While an interlaced signal (1080i 50) is sending alternate horizontal lines with each refresh. This means that frame 1 in an interlaced signal is horizontal lines 1,3,5 to 1079 and frame 2 is 2,4,6 to 1080. This then alternates so that display can render an entire frame every two interlaced frames it receives.

Interlaced signals are common in broadcast as it reduces the bandwidth required to send a TV signal.

Why do you need 50Hz?

Many broadcast and TV event studios, in Europe specifically, require that media servers output at 50 Hz. The Broadcast standard PAL uses a 50 Hz interlaced signal, which means that a 50 Hz signal from Hippotizer is easier to use for these studios. Outside of Europe, 60Hz is more common. (This corresponds to NTSC and PAL-M broadcast standards).

Why it isn't easy to set 50Hz?

Graphics cards and the Windows Operating system are built with the US (and therefore 60 Hz) in mind. As a result, a 50 Hz refresh rate is not regarded as a valid operating mode under normal conditions.

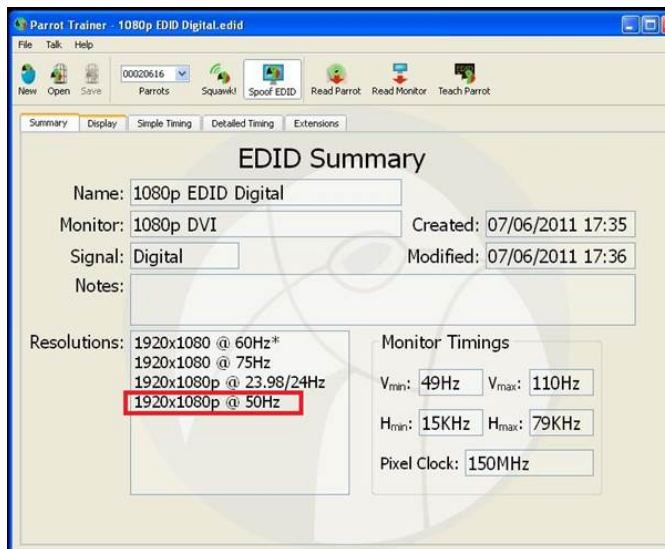
How do you set 50 Hz?

This procedure is designed to essentially force the machine into 50 Hz. In order for it to work, the graphics cards must only ‘see’ 50 Hz displays attached to them. We can do this very easily using a DVI Parrot. (As this will show how to do), If however you do not have a DVI Parrot, any EDID spoofing device will do, so long as it only has 50 Hz profile(s).

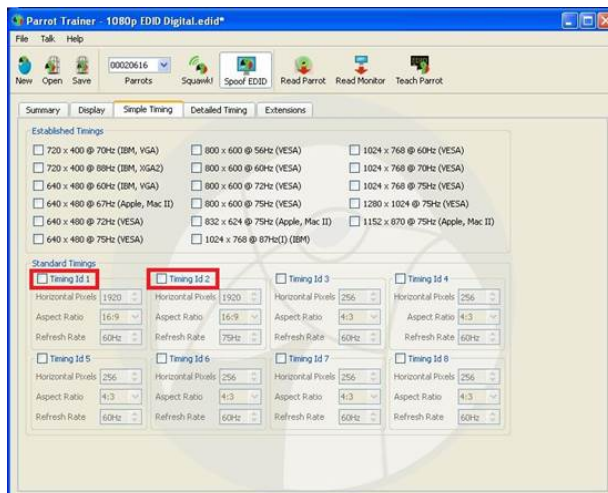
Step 1: Configure the DVI Parrots

On each output, you must set the EDID profile of the DVI Parrots so they only have 50Hz profiles. This is accessed from the Parrot Trainer Application.

-Start Parrot Trainer, and select a DVI parrot. Now push “Read Parrot” to load the parrot’s EDID profiles.



The goal is to remove all the profiles from the Resolutions window, except the highlighted 50 Hz profile. To do this, go into Simple Timings and un-tick the highlighted buttons. (And any others that are not for 50 Hz).



If more non-50hz timings remain under the summary after removing them in Simple Timings, then go into the Extensions tab and de-select any that are highlighted. Again, leave any profiles that are for 50Hz. Once this is done, save the profile and press Teach Parrot to program the parrot. You can also use the same profile to Teach any other Parrots that need to be done. On an HD system, you should flash both Parrots to 50Hz profiles even if you are only using single output mode.

Step 2: HDTV Modes in ATI Control Centre

Open the Catalyst control centre by right clicking on the desktop and selecting Catalyst Control Centre. From the Left hand menu, expand the Digital Panel icon, and Select HDTV Support.



Now, in the "Graphics Adapter" drop down menu select display 2. This should correspond to the Output card in an HD system, or to output 2 on a single card server such as Grasshopper or Hippo Critter.



Next, Select 1080p50 from the top list and click Apply. A warning dialogue will appear; acknowledge it.



After applying, select the 1080p50 timing from the lower menu and click apply format.

Finally, repeat this procedure for the other adaptor (For HDs only) by changing the top drop down menu.

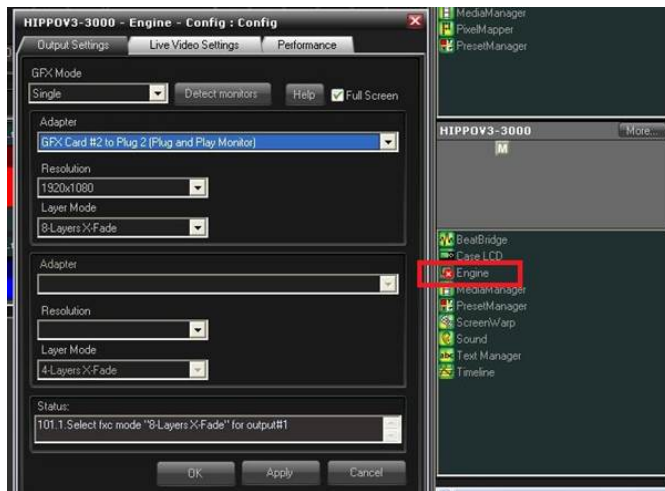
Step 3: Set the display resolution in windows BEFORE starting Hippotizer

Also in Catalyst control Centre, in the Displays manager, select the resolution you need for the output, and confirm that the frequency dropdown is showing 50Hz.

-If it does not show 50 Hz, or shows both 50 and 60Hz then you will need to go back into the custom HDTV resolutions and remove the ones you are not using.

Step 4: Start Hippotizer

Now you can start the engine of Hippotizer. Keep in mind, the Layers will not always load the first time after configuring 50Hz. In this case, go into the Engine settings by right clicking the engine icon in HippoNet Overview and selecting settings.



From here select the output card you would like (On HDs it will be Card #2), and select the layer mode to use. Apply the settings, and the Engine should start loading layers. When it finishes loading layers, you can confirm that it is outputting 50hz from the Speedometer. The engine should now start-up this way without any need to change anything.