Avid4 Installation and Configuration

The installation and configuration of a fully working Avid4 Media PC contains a number of steps, and is largely manual. This is because it makes use of a number of separate Microsoft and third party components, which must all be installed and configured.

# Hardware Requirements

There are two mandatory major hardware components (in addition to appropriate speakers and a screen).

* A Yamaha AV Receiver.
* A Media PC running Windows 7 or Windows 8.

The Avid4 media PC needs some non-standard devices.

### Digital TV Tuner

For terrestrial TV to be viewed and recorded via Windows Media Center

### M-Audio 2496

In order to output the same audio content on both the analog and digital inputs into the Yamaha receiver (necessary to provide flexibility in switching outputs within the receiver), an audio device (sound card) with this ability is required.

It is possible that the media PC’s built-in audio outputs could do this. But I already owned a high-quality audio card dating from the original Avid1 hardware which gives superb audio quality. This is an M-Audio Audiophile 2496 (<http://www.m-audio.com/products/en_us/Audiophile2496.html>). So Avid4 still uses this card in a PCI slot, complete with its PC software. A different media PC without PCI slots would need another solution – possibly the on-board audio or USB-connected audio.

* Install the M Delta Audiophile 2496 drivers, and configure both Digital and Analog outputs to be the same output of the internal mixer.

### USB UIRT

To control the Sky box, for those aspects not supported by the Sky web services, the only mechanism is Infra-red. This is particularly necessary for turning the Sky box on and off. This is achieved using a USB-UIRT device, which is an infra-red transmitter, connected via USB, obtained from <http://www.usbuirt.com/>.

* Install the USB-UIRT drivers.

### USB HDMI-CEC

To turn the TV screen on and off, the best solution found has been HDMI-CEC. The HDML-CEC codes are generated by an external RainShadow USB HDMI-CEC bridge obtained from <http://rainshadowtech.com/HdmiCecUsb.html>.

* Install the USB HDMI-CEC bridge drivers
* Install the ValkyrieTech (<http://valkyrietech.com/>) HTTP service

# Windows OS Requirements

There are some non-default requirements for the Windows OS.

* Windows Media Center  
  is required for terrestrial TV viewing and recording. This is included with Windows 7 Home Premium and is an inexpensive feature that may be added to Windows 8 Pro or the more expensive “Pro Pack” upgrade.
* .Net Framework 4.5  
  can easily be installed from the Internet
* Internet Information Services (IIS)  
  is not installed by default on Windows 7 or Windows 8, but must be added as a Windows feature, together with ASP.Net. In IIS Manager, for the “Server” (the top-level Media PC), in the “ISAPI and CGI Restrictions” page, set the ASP.Net v4.0 to “Allowed”.

# Installing and Configuring Player Applications

## Windows Media Center (WMC)

WMC should be installed to Windows and configured for the TV tuners to be able to watch and record TV. Once it is working, there is no additional configuration required for use within Avid.

## Zoom Player

It is possible that the free version of Zoom Player may be sufficient for its use within Avid, though it has only been tested on the “MAX” version.

This should be installed and configured to be able to play DVDs, media files and WMC TV recordings. Once it is working on its own, there are a few small configuration changes to allow it to work within Avid. On the “System” advanced options panel, two options must be checked:

* “Enable Control Web Server”, with default port number 4768
* “Enable External TCP Control”, with default port number 4769

## J River Media Center (JRMC)

J River Media Center is a very flexible and powerful media player and viewer and is used in Avid for playing all stored music and for viewing photos. As the catalogue structure presented in Avid is much more constrained than the extreme flexibility offered by JRMC, there are a number of constraints on how JRMC libraries should be organized.

The first constraint is in the on-disk storage of music. Any albums which should primarily found by “Composer” rather than by “Artist” should be stored within a folder named “Classical”. Other music (to be found by Artist) can be stored outside a folder named Classical. All these folders (e.g. “Classical”, “Music” and “Photos”) should normally be set up as configured “Auto-import” paths within JRMC.

As the Avid views are primarily “album focussed”, all tracks on any albums with multiple artists should be tagged with an “Album artist” value, which may be (e.g.) “Various” or may be the name of the main artist(s) on the album as appropriate.

There should be JRMC “Artist”, “Album” and “Composer” views. These will not be used directly by Avid, but should be used to check the quality and “navigability” of the catalogue by those tags, and to (e.g.) add necessary “Album artist” tags and to rationalise different spellings of artists and composers. These views are also useful to present a similar structure if JRMC is used as a DLNA server as well as for Avid.

Playlists in JRMC are shown in Avid. These can be ordinary lists of tracks or smart lists. However, only those playlists under the “Avid” playlist folder will be displayed for playing.

For auto-importing folders of photographs, it can be useful to configure the “Photos” auto-import folder to add the setting to “Apply these tags:” with value “Album: FileFolder()”. This assigns the folder name as the album name for grouping of photographs, rather than the default “date taken”.

Two important JRMC options that must be set are:

* On “Startup”, to select “Run on Windows startup: Media Server”.
* On “Media Network” to enable “Use Media Network to share this library and enable DLNA”. The port number should be left at the default value of 52199.

## Remote Potato

Remote Potato should be installed to Windows and configured for display of the installed WMC. Once it is working, there is no additional configuration required for use within Avid. The port number should be left at the default value of 9080.

## G-Force

If required, the G-Force music visualization program from SoundSpectrum can be installed and JRMC configured to use it. Installing the Platinum product also allows music visualization of Spotify music using its stand-alone application. Once it is working, there is no additional configuration required for use within Avid.

# Avid4 Installation

The Avid installer copies all required files into the folder C:\Avid.Net. The path cannot be changed.

In addition, Windows is configured to run the Avid.Desktop and Avid.Spotify tray applications on startup. As these two tray applications run as Administrator, to avoid warnings on startup (perhaps when unattended following a power failure), it may be appropriate to disable Windows User Account Control (UAC).

# Avid4 Configuration

As installed, the configurations of the Avid components are incomplete. It is necessary to edit a number of XML files with a text editor. However, these edits are fairly simple.

It is also necessary to set the Avid.Desktop and Avid.Spotify applications to “Run as Administrator”. This is set on the “Compatibility” tab of the properties of each application file after it has been installed.

## Desktop Config

The **Avid.Desktop.exe.config** file has an <appSettings> value “**IPAddress**”, which should be the local IP network address of the media PC itself on the same LAN to which the Sky Box is connected.

## Spotify

The Spotify API used by the Avid.Spotify tray application requires a file “**C:\Avid.Net\spotify\_appkey.key**” which the installer does not provide. As this installation comes with source and is intended for developers, you will need to obtain your own developer’s key from Spotify to store in that path.

The first time Avid.Spotify tray application runs, it will prompt for Spotify credentials, which must be for a premium account.

## AvidConfig.Xml

The file “C**:\Avid.Net\** **AvidConfig.xml**” contains a number of paths, IP addresses and other settings which may be edited as appropriate. Each is commented with its meaning and any required changes should be clear.

# Adding the Web Site to IIS

In IIS Manager, create a new site:

* The site name should be “Avid4”
* The physical path should be C:\ Avid.Net\ Avid4.Net.
* The port number can be anything not in use – “83” works well.

There will be an application pool “Avid4”; configure its “Advanced Settings” for:

* .Net Framework 4.0 (not the default 2.0)
* Managed Pipeline Mode “Classic” (not the default “Integrated”)
* Set Idle time-out to “0”
* Set Regular Time Interval to “0”

Configure its “Recycling …” to recycle at a specific time, when the system is unlikely to be in use (e.g. 03:00).

# Setting up Controller Clients

One or more touch devices can then be set up.

For each “narrow” device, such as a Smartphone, in the browser open a page to the IP address and port of the IIS site – e.g. <http://192.168.1.64:83>.

For each “wide” device, such as a Tablet, in the browser open a page to the IP address and port of the IIS site with a “Wide” page – e.g. <http://192.168.1.64:83/Wide>.

One the page is opened, save it as a desktop shortcut, so that it can then be re-opened as a web application.