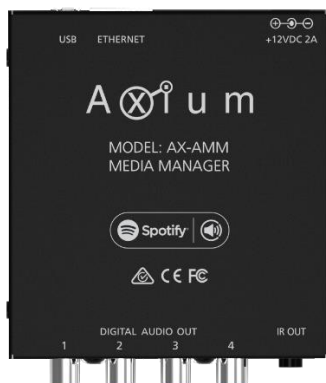


Axium Media Manager (AMM) Installation Quickstart

The AMM is a versatile unit which covers a variety of use cases. As such it requires some customisation in the setup procedure in order to meet these needs. Primary among these procedures is both the definition of which media sources and streaming services are to be available including the necessary user credentials to access them and also the definition of how the 4 digital outputs and 8 distributed network streams are going to be used in the system from an architectural viewpoint.



There are two approaches to configuring an AMM for a system. Both of these will be discussed individually in the following sections.

[Configuring with Axium Design Portal \(ADP\)](#)

[Configuring with a Web browser](#)

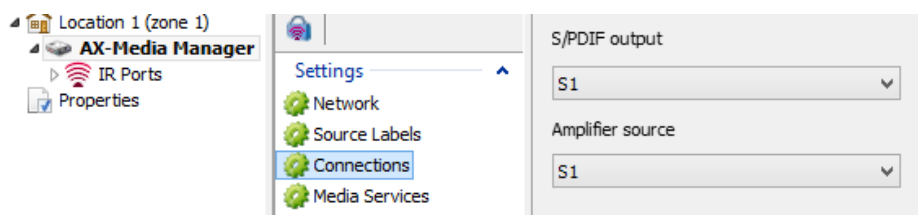
Configuring with Axium Design Portal (ADP)

This is the preferred method of setup since the entire system logic is preserved in the convenient project format. Assuming that the project is properly stored and backed up, it ensures that all the programming required for the functioning system is easily available for changes to be made or for reinstatement on different hardware if for some reason it becomes necessary.

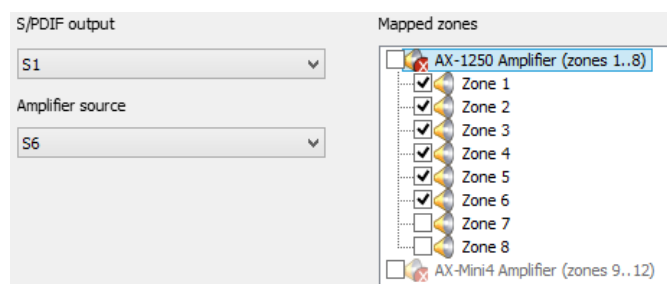
For those familiar with Axium project design, familiarisation with the AMM designer should be straightforward once having been explained the various configuration options.

Connections setup (for digital outputs)

To configure the physical digital outputs, both the Source Labels and Connections settings groups are used. In the Source Labels settings area the sources can be named and enabled or disabled. Any enabled outputs are available under the S/PDIF output selection box as shown below.



Once an output is selected, there is the option of selecting which amplifier input the connection is linked to. After selecting the input, the available zones can be set which completes the mapping.

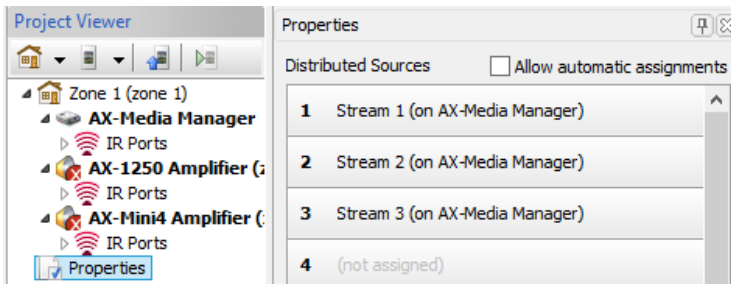


With the connection defined in this manner, a media player will be provided by the AMM upon selecting S6 on any of the included zones. In the case of third party services such as Spotify Connect, AirPlay and the UPnP media server, the client applications will be able to display each of these zones as available streaming targets. To allow distinct and simultaneous media control to the different zones in the mapping. Another connection may be set up with the same zones but with a different amplifier source input. With this information the AMM is able present available zones for playback and upon playback will automatically select one of the valid connections.

Distributed sources setup

Distributed sources on the AMM are virtual sources which are streamed over the network to an Axiom amplifier. Any zones that are capable of using distributed sources will have media player functionality provided to them.

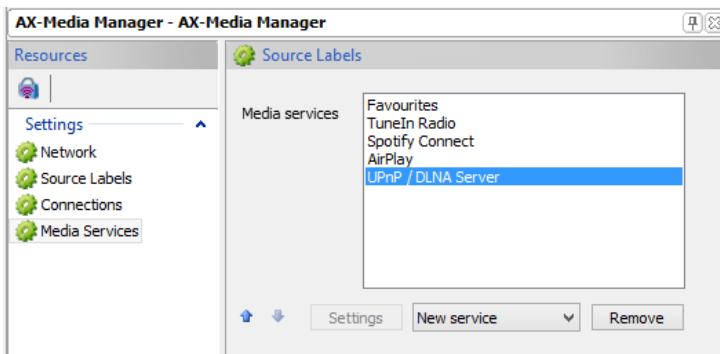
The AMM and any amplifiers must have a coherent perspective on the distributed sources in the system. There is a table of up to 32 distributed sources and 8 of them may be used by the AMM. When changing the distributed source table, the AMM and any amplifiers must all be uploaded to – this will be indicated by the bold typeface in the project viewer.



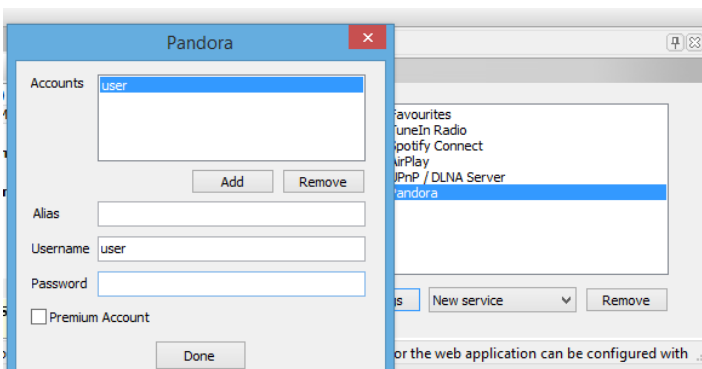
With the distributed sources defined, a media player will be made available to any capable zone which selects one of those sources. In the same manner as the digital output connections, any third party services will be able to display these zones as available streaming targets.

Media sources setup

The AMM has a variety of media sources and streaming services available with more to be available in future updates. The available services can be added and removed as required as well as reordered to better suit the user preferences.



Some media sources and media services have additional configuration options which can be accessed with the settings button.

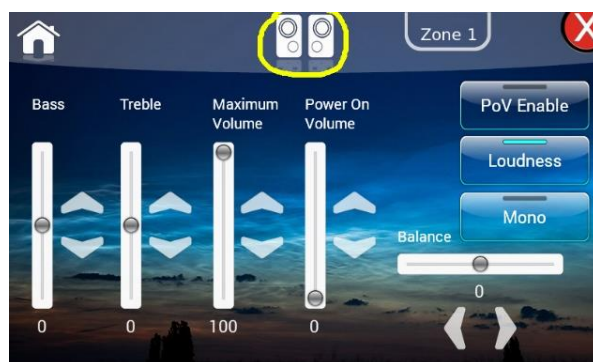


Configuring with a Web browser

The screenshot shows the 'Device Settings' page of the AMM web interface. It includes tabs for Control, Device, Zones, Sources, Connections, and Media Sources. The 'Device' tab is active, displaying 'Device Information' (Model: AX-AMM rev1, Unit ID: 59316, Manufacture Date: 1/12/2016, Firmware Version: 1.0, Temperature: 44° C (peak 47° C), IP Address: 192.168.100.125, MAC Address: DE:59:4C:CB:CD:E7), 'Wired Ethernet - 192.168.100.125' settings (Network Name: amm1, Connection: Automatic Configuration (DHCP)), 'Date and Time' (Date: 20/12/2016, 07:31:09, Time Zone: (GMT +12:00) Auckland), and 'More Devices' (AX-Mini4, AX-Mini4, AX-800).

An alternative means of configuration can be used by means of accessing the internal webserver of the AMM. This is accessible by browsing using your favourite browser. The url for the configuration section is in the form: <http://ammX/config/>, where **ammX** is the hostname of the AMM. The factory default hostname for the AMM is **ammX** where **X** is the last 5 numeric digits of the product serial number.

Another way of accessing the webserver is by first navigating to the amplifier configuration page and then proceeding to follow one of the links to associated devices. The amplifier configuration page has a shortcut link within the standard Axium mobile app layout. This shortcut is located on the settings page and can be triggered by long-pressing (press and hold down) the speakers icon.



The screenshot shows the 'Source Settings' page of the AMM web interface. It includes tabs for Control, Device, Zones, Sources, and Connections. The 'Sources' tab is active, displaying 'Sources on AX-AMM "amm1" 192.168.100.125'. It lists 'Media Source Out' and 'Virtual out' settings, each with checkboxes for 'Enabled' and 'Independent', and a 'Source Name' column.

Connections setup (for digital outputs)

Before any connections are setup, the intended digital outputs must be enabled as appropriate. In this case digital outputs 1 and 4 are going to be used while 2 and 3 are not.

Now that the appropriate sources are enabled, navigate to the Connections page. From here you can select how each digital output is going to be used in the system. In this case digital output 1 is being used as a source input for the AX800 amplifier on source 6. This connection definition allows a media player to become available on the specified amplifier source.

In the webpage and standard mobile app layout, the selection of this source with one of the zones included in the mapping, will load a media player provided by the AMM for that digital output. In addition, there are streaming services which are driven by third party applications where it is essential for available zones to be presented as playback targets, such as Spotify Connect, AirPlay and any UPnP/DLNA controller. The connections definition here provides the AMM with the information it needs for indicating which zones are available for playback. Upon pushing playback onto one of these zones, the AMM will automatically select the amplifier source to suit a connection that is determined to be compatible.

The screenshot shows the 'Connections' page of the AMM web interface. It includes tabs for Control, Device, Zones, Sources, and Connections. The 'Connections' tab is active, displaying 'S/PDIF Output' (S/PDIF 1) and 'Amplifier Source Input' (Source 6). Below this is a table for 'Amp (AX-800 "my800")' showing 'Amp Zone', 'System Zone', 'Zone Name', and a checkbox for each zone.

Amp Zone	System Zone	Zone Name	
Zone 1	Zone 9	Hangar 12	<input checked="" type="checkbox"/>
Zone 2	Zone 10	Vault	<input checked="" type="checkbox"/>
Zone 3	Zone 11	Long drop	<input checked="" type="checkbox"/>
Zone 4	Zone 12	Blast furnace	<input checked="" type="checkbox"/>
Zone 5	Zone 13	Silo	<input checked="" type="checkbox"/>
Zone 6	Zone 14	Observatory	<input checked="" type="checkbox"/>
Zone 7	Zone 15	Lift shaft	<input type="checkbox"/>
Zone 8	Zone 16	Water tower	<input type="checkbox"/>

Multiple connections may be defined incorporating the same group of zones. This allows simultaneous media players to be operational on different zones in the mapping at the same time.

Control

Device

Zones

Sources

Connections

Connections

S/PDIF Output

Sony Philips Digital Interface 4

Amplifier Source Input

n/a

Source 1

Source 2

Source 3

Source 4

Source 5

Source 6

Source 7

Source 8

Source 9

Source 10

Source 11

Source 12

n/a

Save Changes

Undo Change

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A connection may be setup so that no Axiom amplifier input is required. In this case a media player is made available for direct usage of this output and in third party applications it will show the name of the output. This mode would be useful for providing extended media functionality to a home theatre system for instance.

Distributed sources setup

Distributed sources on the AMM are virtual sources which are streamed over the network to an Axiom amplifier. Any zones that are capable of using distributed sources will have media player functionality provided to them.

The AMM and any amplifiers must have a coherent perspective on the distributed sources in the system. There is a table of up to 32 distributed sources and 8 of them may be used by the AMM. In an out of the box configuration where there are no specified distributed sources in use, the AMM and amplifiers will negotiate in order to automatically settle on a configuration. The AMM sources will be prioritised and the amplifier sources will follow. As such, using the system in this manner this should provide media player functionality automatically for any zones that are capable of using distributed sources. It is however preferable to define the distributed sources manually for the sake of assurance and reliability but also because the system may not select the sources as appropriately as a person would. This is especially true if there are more than 32 sources available in the system, in which case all remaining sources will be omitted.

Control

Device

Zones

Sources

Connections

Media Sources

Media Services

Service List

Pandora

TuneIn Radio

Windows Network Shares (SMB/CIFS)

AirPlay

Spotify Connect

Add Service

Save Changes

Undo Changes

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Available services:
UPnP / DLNA Server
Favourites

Control

Device

Zones

Sources

Connections

Media Sources

Media Services

Service List

Pandora

TuneIn Radio

Windows Network Shares (SMB/CIFS)

AirPlay

Spotify Connect

UPnP / DLNA Server

Favourites

Add Service

Favourites

Favourites

Add

Move up

Move down

Remove

Name

Stream URL

Image URL

Stream Desc

Media sources setup

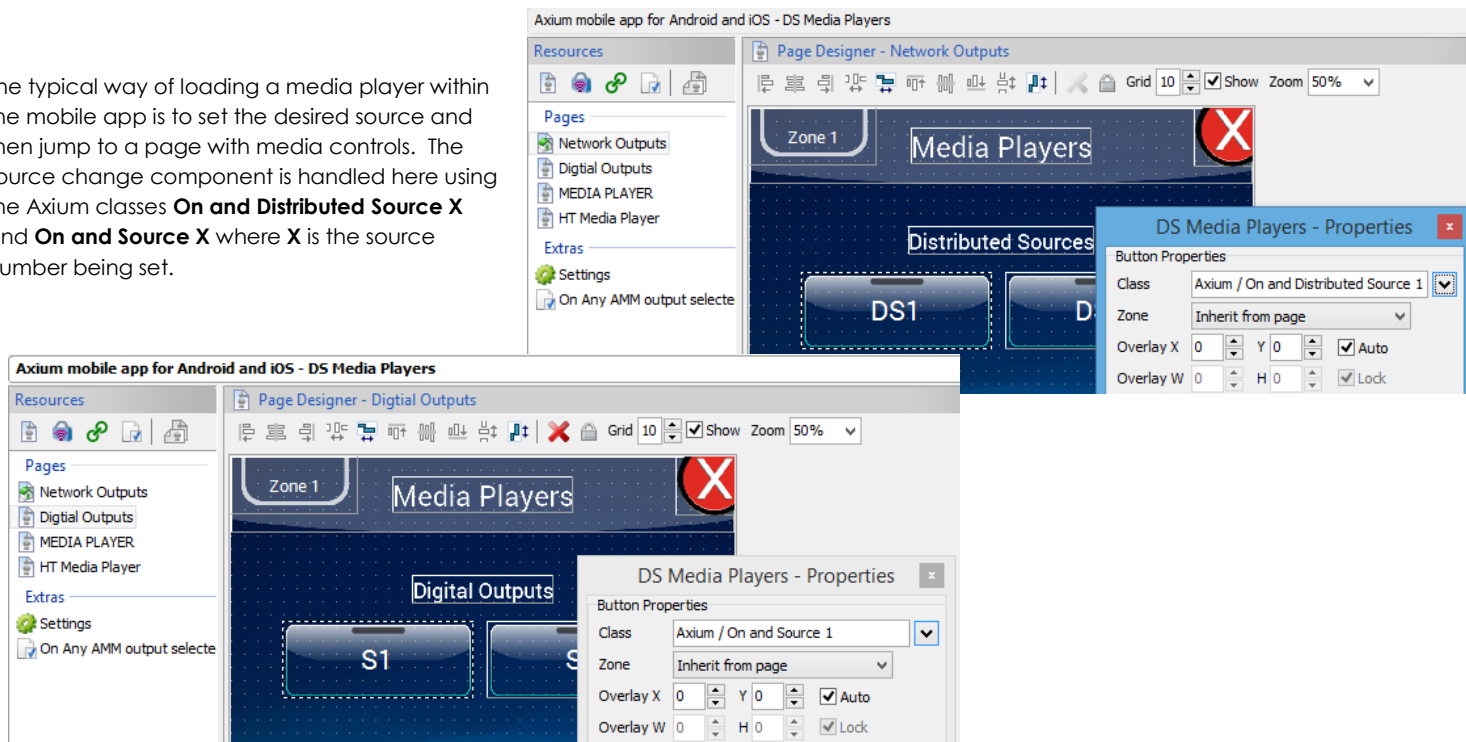
The AMM has a variety of media sources and streaming services available with more to be available in future updates. In the out of the box configuration there the services which do not require configuration are enabled by default. This includes TuneIn, Favourites, AirPlay, Spotify Connect and the UPnP Server. The available services can be added and removed as required as well as reordered to better suit the user preferences.

Some services have additional configuration options available. These options can be accessed by selecting the service in the list and pressing the tools button on the right side next to the delete button.

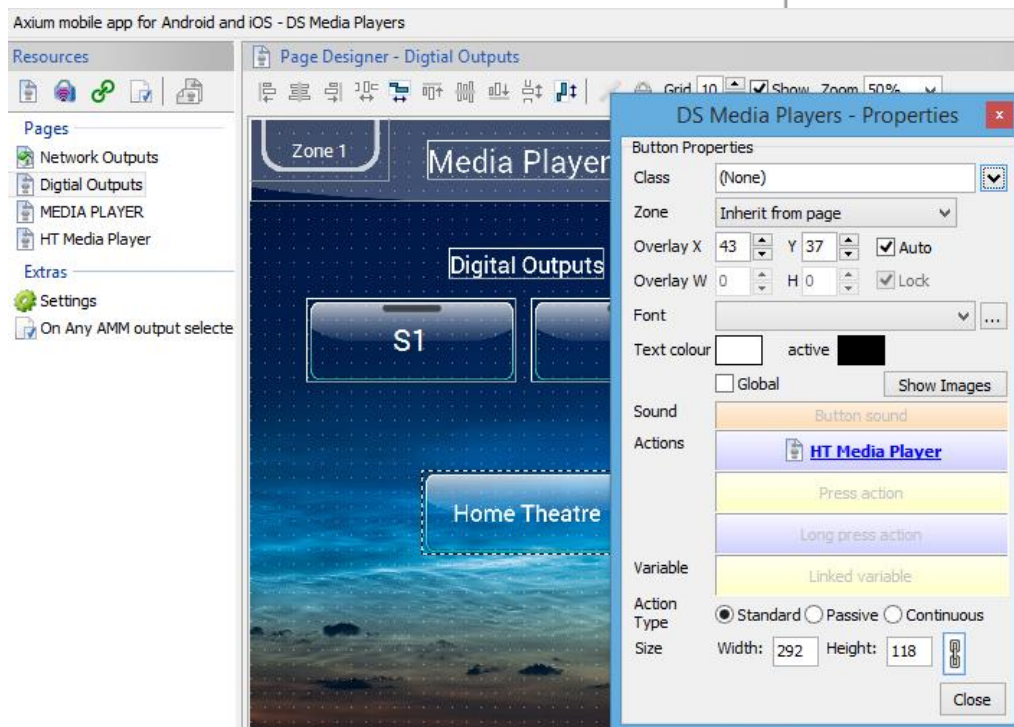
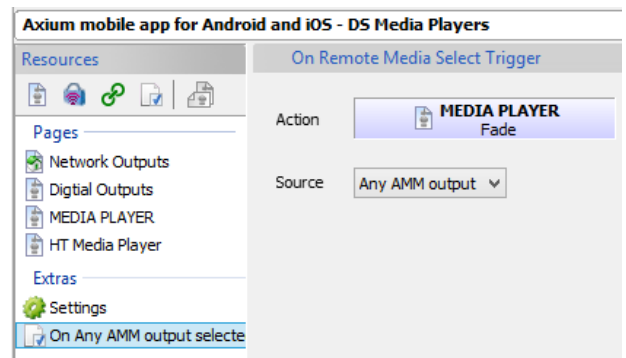
Mobile App Setup

This section covers how to use the Axiom media player applet with the AMM. The same procedures also apply to the KPC designer. If you are unfamiliar with applets in an Axiom system please refer to the section on Applet Design in the generic [mobile app documentation](#). For quickstart GUI designs look at the templates library and applet examples gallery within ADP.

The typical way of loading a media player within the mobile app is to set the desired source and then jump to a page with media controls. The source change component is handled here using the Axiom classes **On and Distributed Source X** and **On and Source X** where **X** is the source number being set.

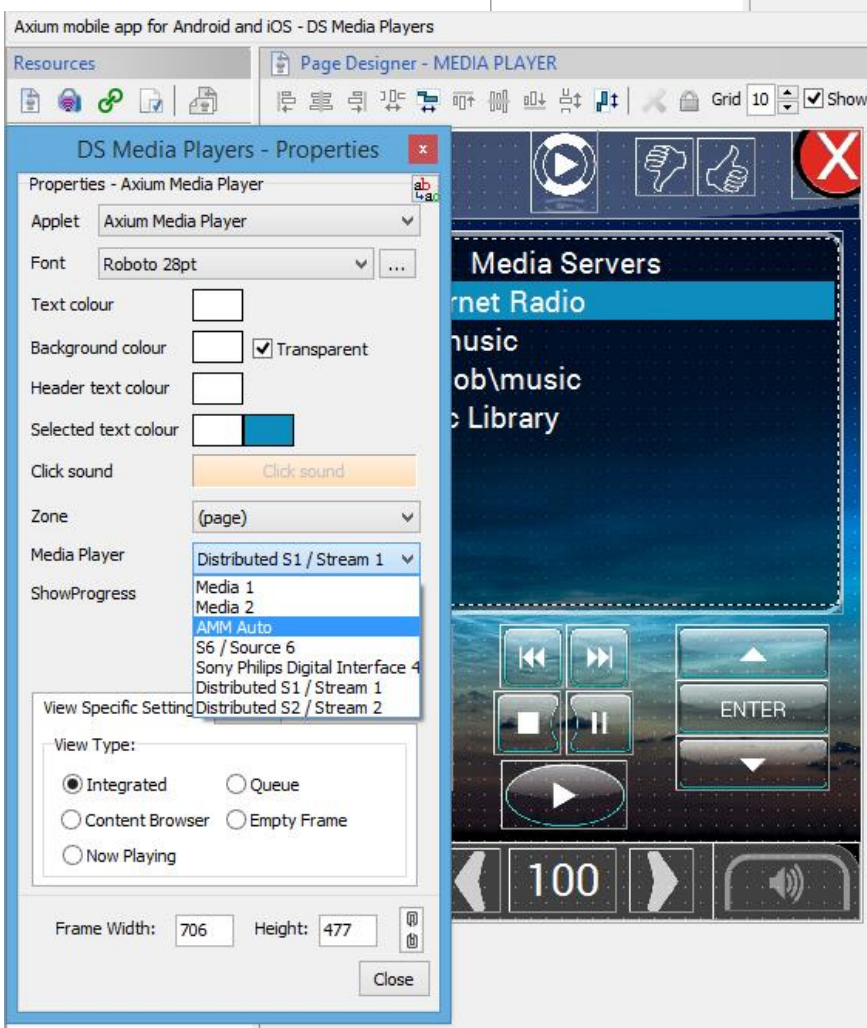
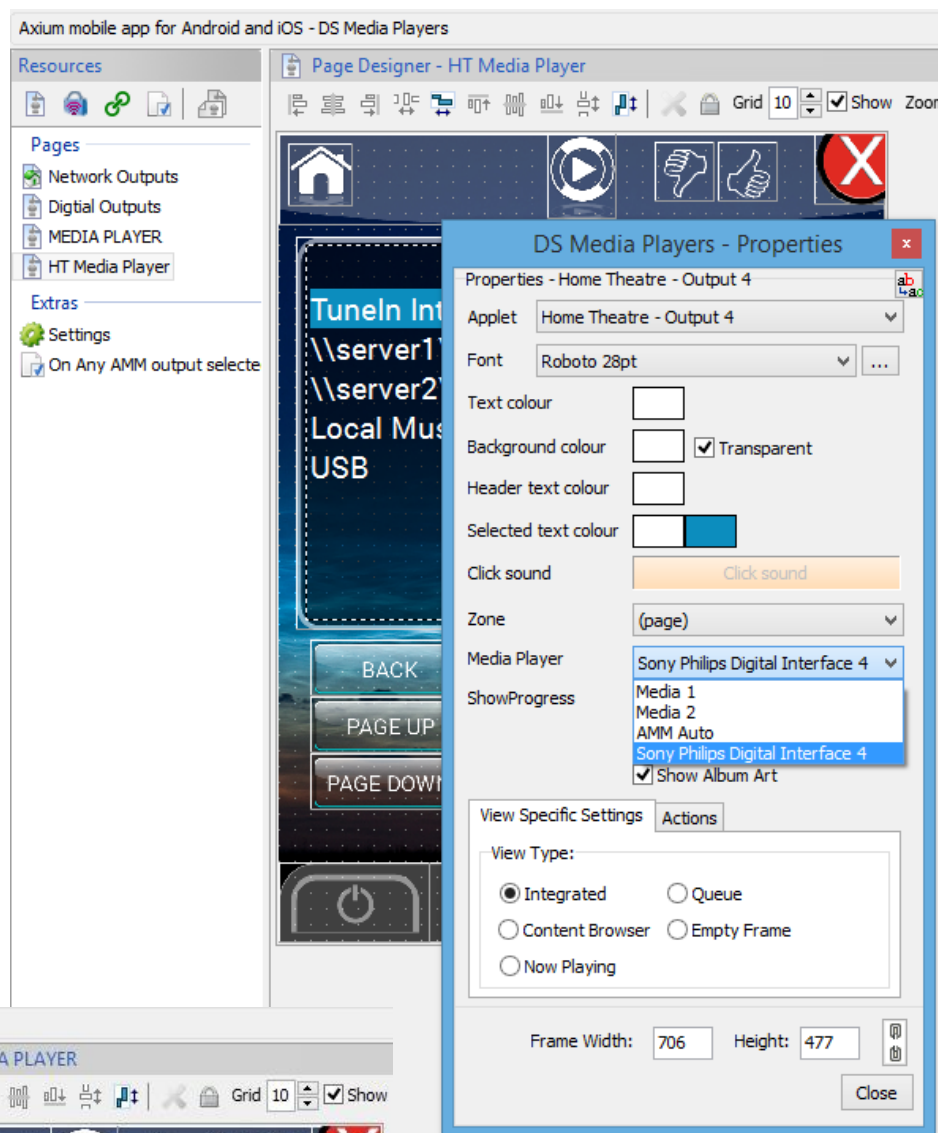


Now the page jump component can either be handled by explicitly setting the desired media control page to one of the press or release actions, or by creating a **Remote Media Action** trigger. This trigger will fire whenever the indicated media source is selected by the user. In this case the special **Any AMM output** is used which provides unified action upon the selection of either a source distributed by the AMM or an amplifier input source for a zone that is in a valid digital output connection.



This case shows the loading of a media player intended for a home theatre system control. Notice there is no Axiom source being set. Probably instead you would want to send a custom command to instruct the home theatre to select a digital input source that will receive the output audio from the specified AMM digital output.

Now the media player applets on both media player pages must be configured appropriately. Upon opening the properties of the media player applet, there are a number of available options. In this case the home theatre media player is being configured so the unmapped fourth digital output is required. Since the AMM is configured as such, the applet media player drop down list shows the output as an available media player source. Note that the **Media 1** and **Media 2** options are legacy media sources which are used for the internal Axiom amplifier media players.



Now for the other media page which handles both the AMM media players provided by the distributed sources and also the media players for the digital outputs which have mapped connections. It is possible to set the media player to any of the specific sources that are configured to provide a media player, but in this case we have programmed all of the source selections with a link to the same media control page. In order to handle this, the **AMM Auto** media player option is required. With this mode active, the media player applet will initialise and the AMM will attempt to automatically select an appropriate media player source. Since in this case the page load is made because of a user initiated source selection, the AMM will load the media player for the source indicated. It is possible to load the applet without the current source being valid. In that case the AMM will select the source for the chosen media player. This behaves in the same manner as for that of the third party media services such as Spotify Connect, AirPlay and the UPnP media server - that is that the AMM will first look for an available digital output connection and if there aren't any it will look for an available distributed output instead.