

Visionary Solutions, Inc.

Amino A140 / H140 Set Top Box Configuration Manual (Visionary Version - 104)

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Introduction

This document is intended to assist users of the AVN series encoders in the configuration of the Amino Set Top Box (STB) to decode/display Multicast, Unicast and HLS streams. This document is NOT intended to provide installation instructions for either the Amino STB or AVN products. See the appropriate hardware documentation for installation information.

Requirements

This manual is intended for the **Aminet A140, Aminet H140 – Visionary Version** only.

Special Note: The VSI Channel Configuration page, as outlined at the end of this document, is only available on version 104 (OEM version: VSI 20-00051-104) or later.

To determine your STBs version number, login to the STB, as directed in Step 2 above, navigate to the Software page and look at the “OEM version”. The last three numbers in this line are the VSI Version number (e.g. VSI 20-00051-**104**).

This document is not intended for use with other Amino products.

In order to configure the Amino STB, the user must have a USB Keyboard.

**** Special Note ****

No RTP Support on Amino STBs. The Amino STB cannot decode AVN series encoder streams encoded with RTP encapsulation. Make sure the AVN series encoder streams have the Encapsulation setting configured to “UDP”.

Amino 140 Configuration Manual

Step 1. Main Page

*** Alert ***

The Amino A140 and Amino H140 require an HD compliant, digital monitor for initial configuration. The STB's output is set to HD by default. If not using an HD compliant, analog component or digital monitor, nothing will be displayed. See Step 5 below for information on configuring this parameter.

**** NOTE **** Screen shots may vary dependent upon product model, firmware version and/or browser.

Set up the Amino STB as instructed in the unit's user documentation. After installation, the VSI splash screen will appear momentarily, then the screen will go blank, with a channel number blinking on and off slowly.

*** Special Note ***

Visionary Version Amino A140 and Amino H140 require NO SPECIAL CONFIGURATION OR MIDDLEWARE, in most cases. When installed on a DHCP network, on the same subnet as the encoders streaming to them, simply set-up the AVN encoders to stream to the VSI channel map as described below. Skip to step 7, for details.

Step 2. Enter Management Password

In order to bring up the management pages, the user must first enter the management password.

Special Keyboard Note: If using a USB keyboard, the keyboard must be plugged into the Set Top Box (STB) prior to power up in order for the STB to recognize the keyboard.

From the **Keyboard (IR or USB)**, press: **<Alt>m** - (two buttons pressed at the same time)

This brings up the **Password Request** box. The password is "leaves" by default. After entering the password, select the **<OK>** button.

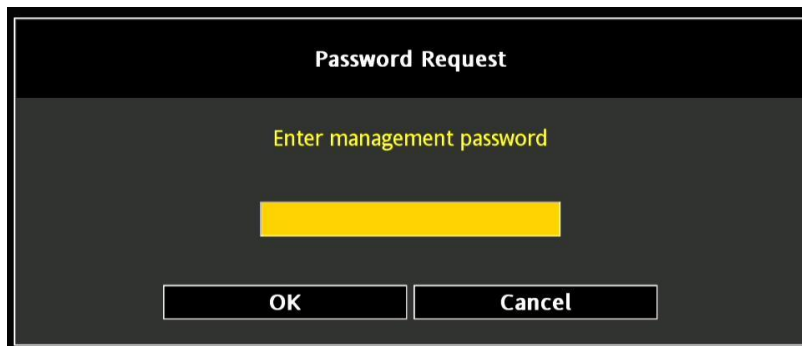


Figure 1 - Password Request

Amino 140 Configuration Manual

Step 3. Management Pages

The main STB Management page lists all available Amino STB pages. Using the Keyboard, scroll down to the desired page and press **<Return>/<Enter>**.

There are three pages of major interest to AVN series encoder users: **Network** Configuration, **Browser** Setup and the **DHCP** pages. These pages are shown below in more detail.

****CAUTION****

Do not initiate the “Upgrade” option. Initiating the Upgrade option can cause the Amino STB to malfunction. This malfunction will necessitate reprogramming of the unit by VSI. Reprogramming will cost \$50 per unit, plus shipping both ways.

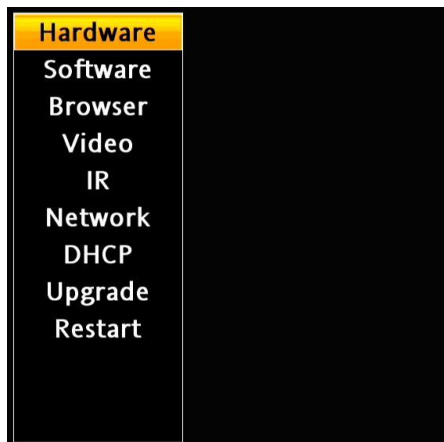


Figure 2 - Management Page

Step 4. DHCP – (basic network configuration)

Note: the DHCP page is used for basic network configuration settings, such as IP address, Netmask, Gateway and DNS.

DHCP Configuration – Enabled by default

The Amino STB has Dynamic Host Configuration Protocol (**DHCP**) turned on as the factory default. If your network has a DHCP server on it, the Amino STB will automatically acquire all necessary network values, which will be displayed on this page (see Figure 3).

Figure 3 shows the Amino STB set for DHCP (Enabled). To change, select **<DHCP>** in the left-hand column and press **<Enter>**. In the right hand column, navigate to **<DHCP>** and press **<Enter>** again to edit this value. Use the left & right arrows keys to change the value, then press **<Enter>** and input the default Password “snake”, then press **<Enter>** to save.

Amino 140 Configuration Manual

Hardware	DHCP	Enabled
Software	IP address	192.168.1.228
Browser	Netmask	255.255.255.0
Video	Gateway	192.168.1.1
IR	DNS	4.2.2.1
Network	Domain	FAIL
DHCP	Lease time	7200
Upgrade	Renewal time	3600
Restart	Rebind time	6300

Figure 3 - DHCP Page (DHCP Enabled)

Static IP Configuration

If your network does not have a DHCP server, or you wish configure the Amino STB to a static IP address on your network, you will need to set **DHCP** to **Disabled** and fill in, at minimum, the IP address, Netmask, and Gateway fields.

Figure 4 shows the Amino STB being configured to use a static IP address 192.168.1.88, with a Netmask of 255.255.255.0, a Gateway of 192.168.1.1 and a DNS of 4.2.2.1.

Note: you will need to set **DHCP** to **Disabled** prior to setting any other network values. Each network value, including DHCP, needs to be configured separately. Entering the **Password** <snake> automatically saves the setting.

Hardware	DHCP	Disabled
Software	IP address	192.168.1.88
Browser	Netmask	255.255.255.0
Video	Gateway	192.168.1.1
IR	DNS	4.2.2.1
Network	Domain	FAIL
DHCP	Lease time	7200
Upgrade	Renewal time	3600
Restart	Rebind time	6300

Figure 4 - DHCP Page (DHCP Disabled)

****CAUTION****

Do not initiate the “Packet re-ordering” option from the Network Menu.

Initiating the “**Packet re-ordering**” option will cause the Amino STB to malfunction. This malfunction will necessitate reprogramming of the unit by VSI. The reprogramming cost is \$50 per unit plus shipping charges both ways.

Amino 140 Configuration Manual

Step 5. Browser Page - (HD vs. SD monitor output)

The **Browser** page is optional and not required to configure the Amino STB to work with the AVN series encoder, when outputting to an HD compliant, digital monitor. By default the Amino STB is set to output to an HD monitor / TV / display (see Figure 5).

Hardware	Home page	file://localhost/mnt/nv/index.html
Software	Full screen mode	Disabled
Browser	GFX resolution	1080 HD
Video	Left margin	0
IR	Right margin	0
Network	Top margin	0
DHCP	Bottom margin	0
Upgrade		
Restart		

Figure 5 - Browser page set for HD monitors

If the display device is not an HD compliant, digital display device, the **<GFX resolution>** setting needs to be changed to - “**SD graphics**”, as shown in Figure 6.

Hardware	Home page	file://localhost/mnt/nv/index.html
Software	Full screen mode	Disabled
Browser	GFX resolution	SD graphics
Video	Left margin	0
IR	Right margin	0
Network	Top margin	0
DHCP	Bottom margin	0
Upgrade		
Restart		

Figure 6 - Browser page set for SD monitors

***** Alert *****

The Browser's default Home page URL (**file://localhost/mnt/nv/index.html**) should **not be changed!!!**. Doing so disables the VSI Channel Map functionality described in Step 7 below.

If you want the Amino to start on a certain stream / channel on power up, modify Channel 1 or the first channel in your lineup, as described in “Using the VSI Channel Configuration Page”.

Amino 140 Configuration Manual

Step 6. Video page (optional – NTSC vs PAL)

The **Video** page is optional and is only required if switching between NTSC and PAL formats. Use the **<TV system (Restart)>** setting to switch between formats.

Hardware	TV system (Restart)	NTSC-M (US)
Software	Default video server	nCube
Browser	Trick play	6
Video	No RTSP event timeout	4
IR	RTSP end timeout	6
Network	No IGMP event timeout	10
DHCP	IGMP end timeout	8
Upgrade	No UDP event timeout	8
Restart	UDP end timeout	8

Figure 7 - Video Page

Step 7. Using the VSI Pre-Configured Channel Map

VSI's Amino STB model numbers Amino A140 and Amino H140 (Visionary Version) ship with a pre-configured channel lineup. Channels 1-99 are configured to decode **Multicast** streams, channels 100-199 to decode **Unicast** streams, and channels 200-299 to decode *PackeTV® Mobile (HLS)* streams.

After initial setup on the network, the Amino STB is ready to decode up to 299 unique streams. Simply set your AVN encoder's or *PackeTV Mobile's* "Stream Destination" address to match one of the preconfigured channel lineup formats and start streaming / viewing.

Multicast

Channels 1-99 are configured to decode Multicast streams using the format 225.168.1.**XX**:1234, where **XX** is the channel number (1-99).

For example to send an AVN Multicast stream to be decoded on channel 5, you would set the AVN encoder's "Stream Destination" to **225.168.1.5:1234**.

"225.168.1.5" is the Multicast IP address, "1234" is the Port Number and they are separated from the IP address with a colon ":". The only value that changes in this Multicast format is the last value (fourth octet) of the IP address. The rest of the values, including the port number remain the unchanged.

Unicast

Special Note: If a significant number of high bitrate Unicast streams are sent to a single Amino STB, playback may become erratic. The "practical" number of streams is dependent upon stream bitrates and should be evaluated for playback quality at desired levels.

Amino 140 Configuration Manual

Channels 100-199 are configured to decode **Unicast** streams using the format <IP Address of STB>:Port #, where the Port # = **1XXX** and **XXX** is the channel number (100-199). **Note the number one “1” before the XXX, for a total of 4 digits.**

For example, to send an AVN Unicast stream to channel 105 on a VSI Amino STB at IP address 192.168.1.75, you would set the AVN encoder’s “Stream Destination” to **192.168.1.75:1105**.

“192.168.1.75” is the IP address of the STB, “1105” is the unique Port Number for channel 105 (1+channel #) and they are separated from the IP address with a colon “:”.

PackeTV® Mobile - (HLS)

Channels 200-299 are configured to decode “*PackeTV® Mobile*” streams using the format/ URL <http://server/hls/XXX.m3u8>, where **XXX** is the channel number (200-299).

Special Note: In order to use the default HLS channels, the DNS server on the network would need to resolve the name “server” to the IP Address of the PackeTV Mobile server.

For more information on [PackeTV Mobile](#) configuration and its use, please refer to the device’s documentation. If a third party HLS server is specified, please contact VSI Customer Service (support@vsicam.com) for assistance.

(Optional) Using the VSI Channel Configuration Page

Special Note: VSI Channel Configuration Page only available on VSI Version 104 or later.

To determine your STBs version number, login to the STB, as directed in Step 2 above, navigate to the Software page and look at the “OEM version”. The last three numbers in this line are the VSI Version number (e.g. VSI 20-00051-**104**).

VSI’s Channel Configuration page, as shown in Figure 8, allows for editing one or all channels. By default, the Amino STB displays the first programmed channel in the list upon start up. Re-configuring the channel map allows any stream type to be assigned to any channel.

Note: For systems requiring multiple Amino STBs with the same custom “Channel Map”, a PackeTV® Mobile server is needed.

Custom Channel Configuration

In order to open the VSI Channel Configuration page, the user must first enter the management password.

From the Keyboard (IR or USB), press: **<Ctrl>c** (two buttons pressed at the same time)

This brings up the **Password Request** box. The default password is “**leaves**”. After entering the password, select the **<OK>** button to enter the VSI Channel Configuration page.

Special Keyboard Note: If using a USB keyboard, the **keyboard must be plugged into the STB prior to power up** in order for the STB to recognize the keyboard.

Amino 140 Configuration Manual

Channel Ranges: The VSI Channel Configuration page allows the display and editing of a channel number range. By default the first 10 channels (range 1 to 10) are displayed.

Edit Range - To display and enable editing of a specific channel range, enter the range values in the **[From]** and **[To]** - edit boxes then select the **<Edit Range>** button. The new channel range will be displayed and the user can navigate up and down the list to make changes as needed.

Delete Range - To delete a specific channel range, enter the range values in the **[From]** and **[To]** - edit boxes then select the **<Delete Range>** button. All Stream “URL” and “Name” values, within the specified range, will be deleted.

How to edit a Channel

Navigate to a channel field (Stream URL or Name) using the **<Arrow Keys>** or **<Tab>** key and select **<Enter>** to enable editing. After editing select the **<Enter>** again to re-enable page navigation. Once all channel changes have been made, select **<Save and Exit>** - to save changes and exit the page. Select **<Cancel and Exit>** to exit without saving any changes.

Special Note: A channel must have both a “Stream URL” and “Name” value in order to be a valid channel in the list. If either of these two fields is left blank, the channel will not be displayed.

Valid Stream URL Formats (e.g. in Figure 8):

- **Multicast** – igmp://<Destination IP address>:<Destination Port>
- **Unicast** – udp://<Destination IP address>:<Destination Port>
- **HLS – PackeTV® Mobile** – http://server/hls/XXX.m3u8, where **XXX** is the channel number (200-299). [See PackeTV Mobile for more information.](#)
- **Other** – enter the URL / Stream address exactly like a browser

Save and Exit - This button saves all changes and exits the page.

Cancel and Exit – This button cancels all changes and exits the page.

Default - This button returns the channel map / list to the default VSI Channel Map, as described in Step 7 and exits the page.

Amino 140 Configuration Manual

VSI Channel Configuration

Select Range of Channel Numbers to Edit

Save and Exit From To Edit Range Delete Range Cancel and Exit

Note: Please enter Stream URL and Name before saving or changes will not be stored.

Channel #	Stream URL	Name
1:	igmp://225.168.1.2:1234	My Multicast Channel
2:	udp://192.168.1.88:1234	My Unicast Channel
3:	http://server/hls/200.m3u8	My HLS - PacketTV Mobile Channel
4:	http://www.vsicam.com	My Favorite Web Page
5:	<input type="text"/>	<input type="text"/>
6:	<input type="text"/>	<input type="text"/>
7:	<input type="text"/>	<input type="text"/>
8:	<input type="text"/>	<input type="text"/>
9:	<input type="text"/>	<input type="text"/>
10:	<input type="text"/>	<input type="text"/>

Save and Exit Default

Figure 8 – VSI Channel Configuration Page