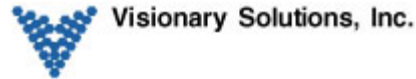


Configuring Amino AmiNET Set Top Boxes to Decode/View AVN Series Encoder Streams



Introduction

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

Requirements

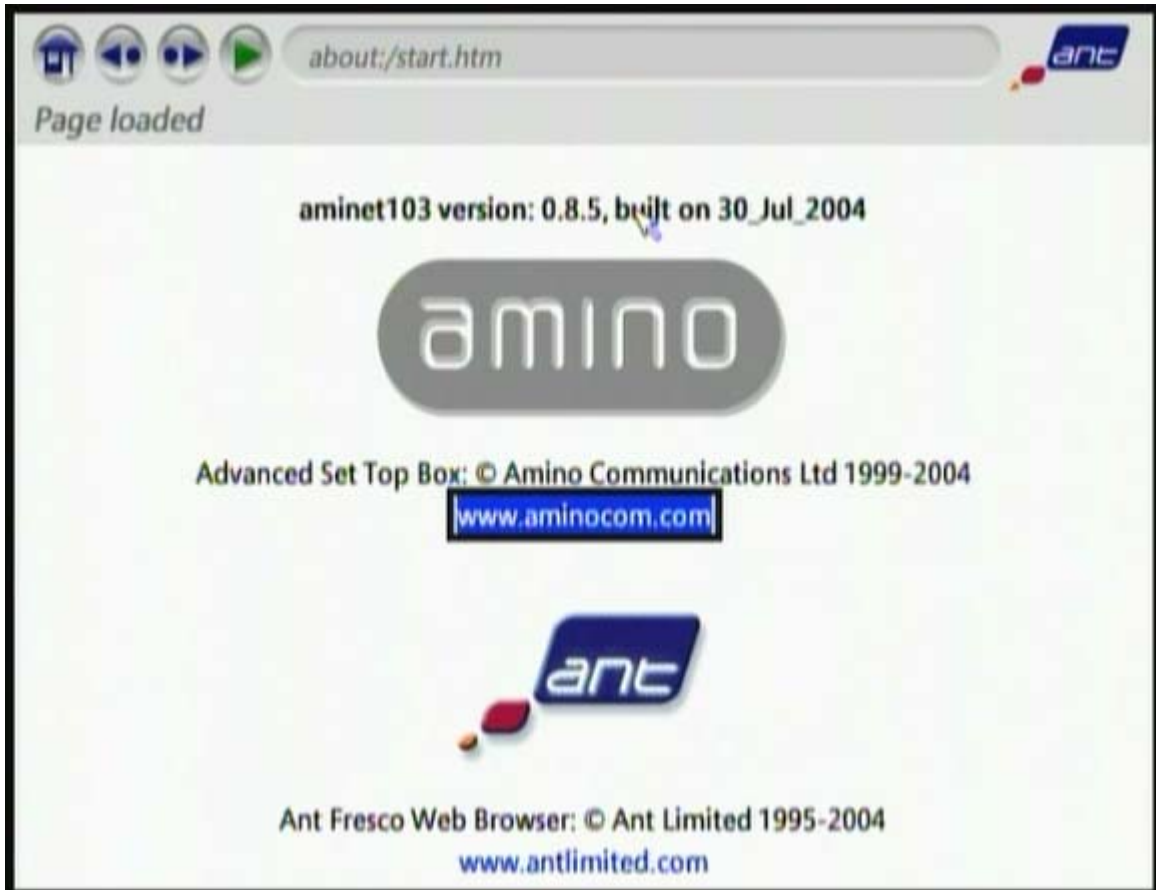
In order to configure the AmiNET STB, the user must have an IR Keyboard. For information on AmiNet compatible IR Keyboards see the Amino Communications Ltd. documentation.

****** NOTE **** No RTP Support on AmiNET STBs.** The AmiNET STB can not decode AVN series encoder streams encoded with RTP encapsulation. Make sure the AVN series encoder streams have the Encapsulation setting configured to UDP.

Step 1. Main Page

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

Set up the AmiNET STB as instructed. After installation, the Main Amino Web page should be displayed on the monitor.



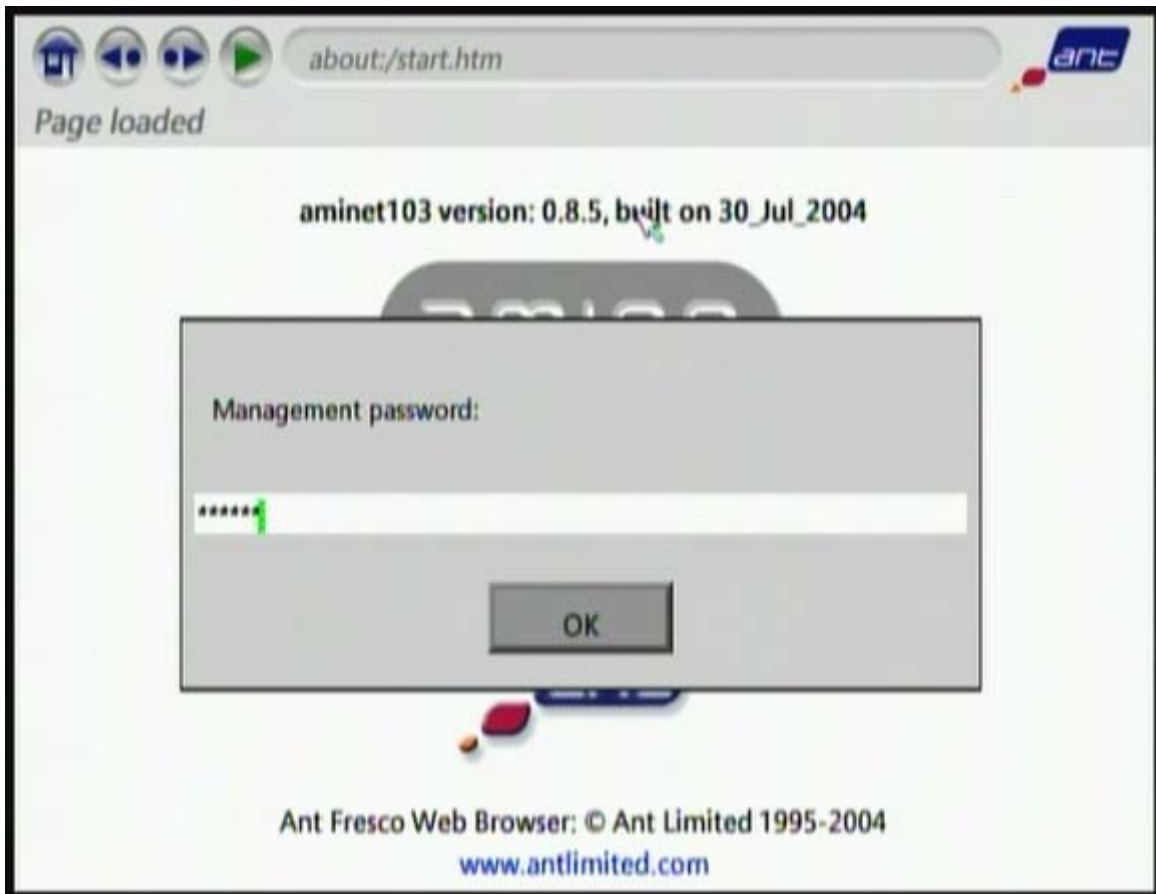
Step 2. Enter Management Password

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

From the **IR Keyboard**, pressing

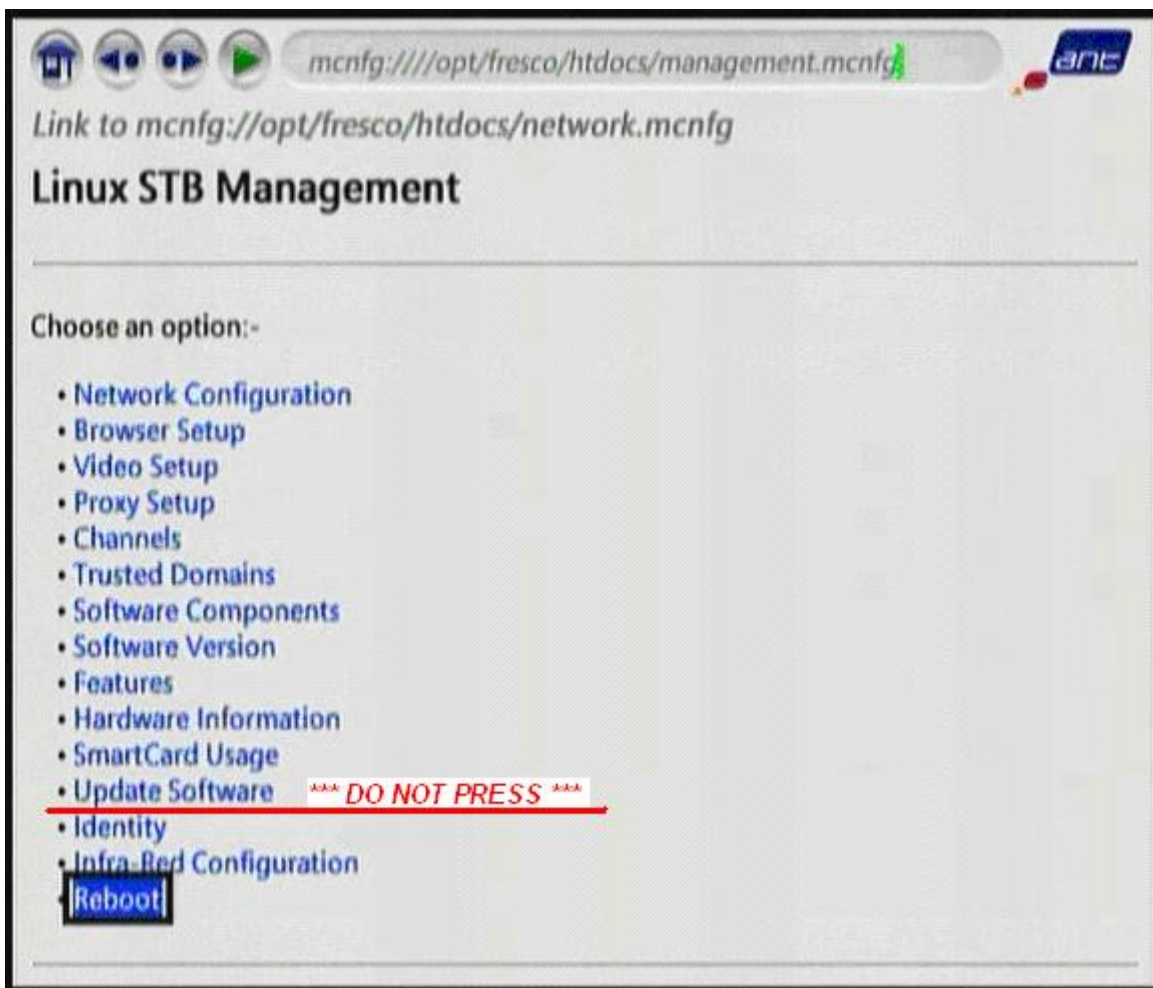
<Alt>m

brings up the Password edit box. The password is set by default to **leaves**. After entering **leaves**, click the **<OK>** button.



Step 3. Management Pages

The main Management page lists all available AmiNET STB pages. Using the IR Keyboard, scroll down to the desired page and click <Return>/<Enter>. There are four pages of major interest to AVN series encoder users: Network Configuration, Browser Setup, Video Setup, and the Channel pages. Each of these pages will be shown below in more detail.



****CAUTION****

Do not initiate the Update Software option. Initiating the Update Software option will cause the AmiNET STB to malfunction. This malfunction will necessitate reprogramming of the unit by VSI. Reprogramming costs \$50 per unit plus shipping costs both ways.

Step 4. Network Configuration Page

****CAUTION****

Do not initiate the “Packet Ordering” option from the Network Configuration Menu. Initiating the Update Software option will cause the AmiNET STB to malfunction. This malfunction will necessitate reprogramming of the unit by VSI. Reprogramming costs \$50 per unit plus shipping costs both ways.

DHCP Configuration

The AmiNET STB has Dynamic Host Configuration Protocol (DHCP) turned on as the factory default. If your network has a DHCP server on it, the AmiNET STB will automatically acquire an IP address.

The screenshot below shows the AmiNET STB being set for DHCP. After checking the <Use DHCP> check box, scroll down to the bottom of the page, enter the correct Password (**snake** by default), and click the <Submit> button.

file:///opt/fresco/htdocs/network.html

Page loaded

Network Configuration

Ethernet Link	Auto detect (default) ▾
DHCP Info	Always Use DHCP ▾
Hostname:	<input type="text"/>
IP Address:	<input type="text"/>
Netmask:	<input type="text"/>
Gateway:	<input type="text"/>
Domain:	<input type="text"/>
DNS:	<input type="text"/>
Time Server:	<input type="text"/>
Time Zone:	<input type="text"/>
Packet Ordering	<input type="checkbox"/> DO NOT PRESS

Password:

[Back to Main Menu](#)

Static IP Configuration

If your network does not have a DHCP server, or you wish to statically configure the AmiNET STB's IP address, you will need to fill in at minimum the IP address, Netmask, and Gateway fields.

The screenshot below shows the AmiNET STB being configured to statically use IP address 192.168.1.55, with a Netmask of 255.255.255.0, and a Gateway of 192.168.1.1. Note you will need to **UNCHECK** the **<Use DHCP>** check box in order for your changes to take effect. After setting up

the static IP configurations as desired, scroll down to the bottom of the page, enter the correct Password (**snake** by default), and click the **<Submit>** button.

file:///opt/fresco/htdocs/network.htm

Link to file:///opt/fresco/htdocs/dhcp.html

Network Configuration

Ethernet Link	Auto detect (default) ▾
DHCP Info	Do not use DHCP ▾
Hostname:	<input type="text"/>
IP Address:	<input type="text" value="192.168.1.55"/>
Netmask:	<input type="text" value="255.255.255.0"/>
Gateway:	<input type="text" value="192.168.1.1"/>
Domain:	<input type="text"/>
DNS:	<input type="text"/>
Time Server:	<input type="text"/>
Time Zone:	<input type="text"/>
Packet Ordering	<input type="checkbox"/> *** DO NOT PRESS ***

Password:

[Back to Main Menu](#)

Step 5. Browser Setup Page (optional)

The Browser Setup page is optional and not required to configure the AmiNET STB to work with the AVN series encoder in standard mode.

If however you would like to have the AmiNET STB go to a certain web address upon boot-up, you can give the AmiNET STB a Home Page address. This may be desirable if the AmiNET STB connects to an AVN series encoder set for boot streaming (See AVN series encoder documentation), and you want the AmiNET STB to automatically go to the steam address and begin decoding upon boot-up. To set the AmiNET STB's Home page to an AVN series encoder stream's Destination IP address, set the address according to the rules outlined in Step 8 (Channel Configuration) below.

****CAUTION****

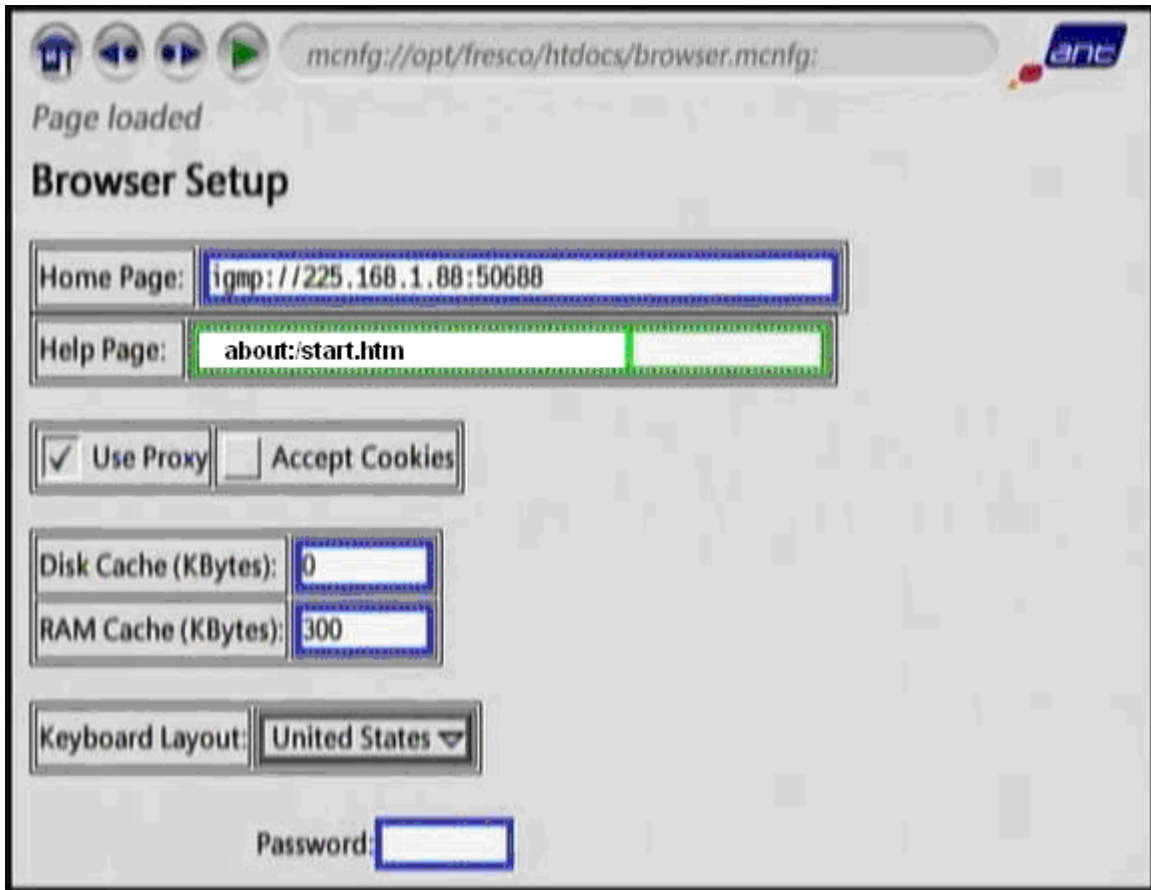
If entering a new home page on the AmiNET 130, 130H, or 130M, it is critical to change/enter and save the following text into the Help Page editbox: `about:/start.htm` . There is a bug in the AmiNET firmware on these units, which can cause them to enter into an infinite and potentially un-correctable loop if the Home Page address is changed from “`about:/start.htm`” and the Help Page address is not modified as directed above. If for some reason the newly entered Home Page address is unreachable or not streaming, the device will enter into a loop and the only way to recover it will be to select the Help button on the IR keyboard, assuming the Help Page address has been set to `about:/start.htm`. This will allow the user access into the device's configuration menus. This malfunction may necessitate reprogramming of the unit by VSI. Reprogramming costs \$50 per unit plus shipping costs both ways.

An optional Help Page address is also available. This address directs users of the AmiNET STB Help feature to a given web address. **See Caution above if programming an AmiNET 130, 130H, or 130M**, as Help Page address should always be changed to `about:/start.htm`, to allow for recovery if the home page address is unreachable.

The other options on this page should remain unchanged for basic configurations.

The screenshot below shows the AmiNET STB having its Home page set to an AVN series encoder's Multicast steam address (225.168.1.88 on port 50688) and its Help page set to a fictitious web address.

After setting up the Browser configurations as desired, scroll down to the bottom of the page, enter the correct Password (**snake** by default), and click the <Submit> button.



Step 6. Video Setup Page

The Video Setup page allows the AmiNET STB's video connections to be set. The two key options are TV Standard (NTSC or PAL) and Output Format (Composite, S-Video, or Composite + RGB). The AmiNet103 does not support S-Video output, even though its Video Setup page has it as an option.

After configuring the video settings as desired, scroll down to the bottom of the page, enter the correct Password (**snake** by default), and click the <Submit> button.



mcnfg://opt/fresco/htdocs/video.mcnfg



[Link to mcnfg://opt/fresco/htdocs/management.mcnfg](mcnfg://opt/fresco/htdocs/management.mcnfg)

Video Setup

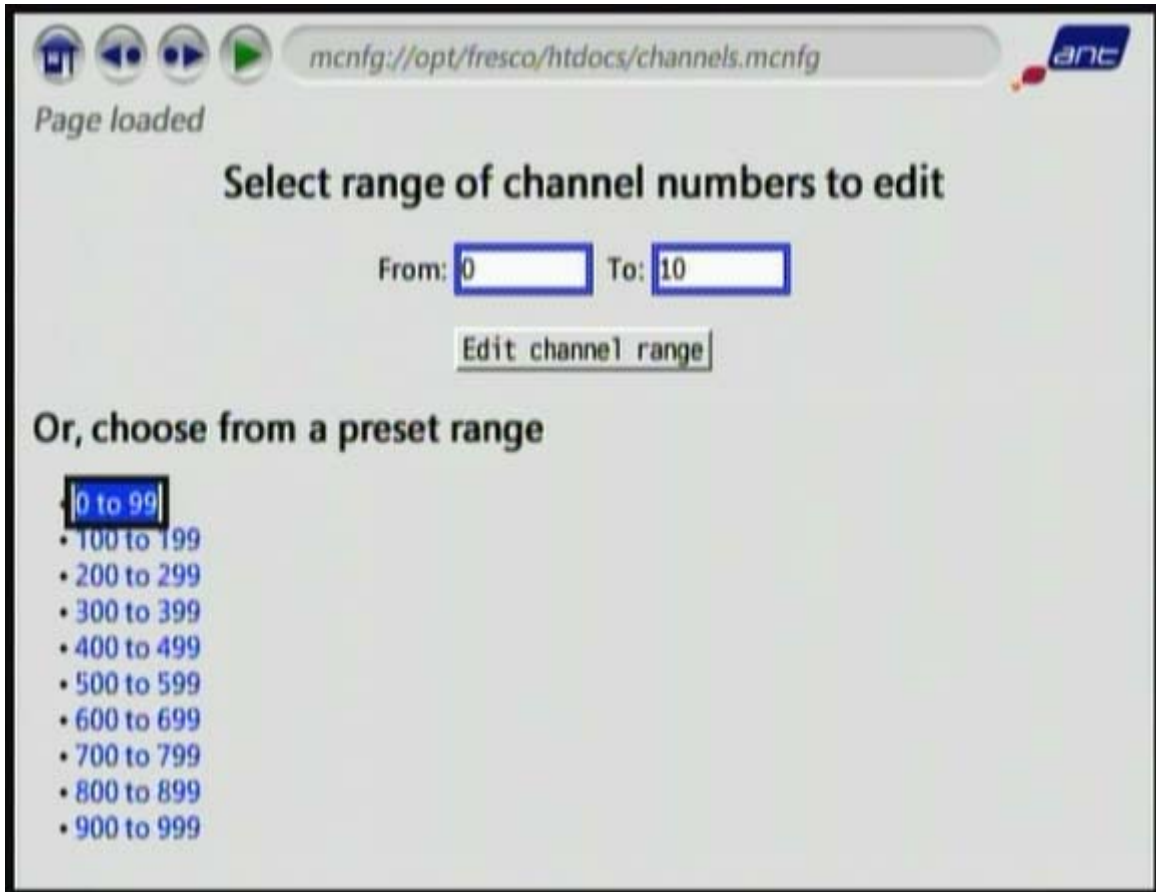
Default Video Server	Ncube Video Server ▾
TV Standard <i>Requires reboot</i>	NTSC-M (US) ▾
Output Format <i>Requires reboot</i>	COMPOSITE ▾
Video Trick-play Scale	6
No RTSP event timeout	5
RTSP End of media event timeout	4
No IGMP event timeout	30
IGMP End of media event timeout	30
Full screen mode	<input type="checkbox"/>
Left margin	0
Right margin	0
Top margin	0
Bottom margin	0

Password:

[Back to Main Menu](#)

Step 7. Channel Selection Page

The Channel Selection page allows the user to select a range channels to edit. Enter a range, by default 0 to 10, and click the `<Edit channel range>` button, or click one of the predefined channel range groups. This will bring up the Channel Configuration page.



mcnfg://opt/fresco/htdocs/channels.mcnfg

Page loaded

Select range of channel numbers to edit

From: To:

Or, choose from a preset range

- 0 to 99
- 100 to 199
- 200 to 299
- 300 to 399
- 400 to 499
- 500 to 599
- 600 to 699
- 700 to 799
- 800 to 899
- 900 to 999

Step 8. Channel Configuration Page

From the Channel Configuration Page, enter the AVN series encoder stream information to be decoded and viewed, into the channel edit boxes.

Multicast

For Multicast streams (streams with a Destination IP address in the range 224.0.0.0 to 239.255.255.255) enter the following on the desired channel's edit box:

IGMP://<Destination IP address>:<Destination Port>

For example, **igmp://225.168.1.88:50688** would decode the AVN series encoder multicast stream at destination IP address 225.168.1.88 and destination port 50688.

Unicast

For Unicast streams (any streams with a Destination IP address **NOT** in the range 224.0.0.0 to 239.255.255.255) enter the following in the desired channel's edit box:

UDP://<Destination IP address>:<Destination Port>

For example, **udp://192.168.1.55:50698** would decode the AVN series encoder Unicast stream at destination IP address 192.168.1.55 and at destination port 50698. Note that for a unicast stream to reach the Aminet device, the destination IP address of the stream must match the actual IP address of the Aminet device.

For older units, with pre 0.9.0 firmware versions, please use the following unicast format.

UDP://:<Destination Port>

For example, **udp://:50698** would decode the AVN series encoder Unicast stream at destination port 50698. Note the second colon after the forward slashes.

Important Note: In order to start a unicast stream to an AmiNet device, the AVN's web or console interface must be used. The PackeTV™ Manager can only start a unicast stream to the destination IP address of the host PC and not another device or application.

URL

To have the AmiNET STB display/view a URL/web page, simply enter the URL into the desired channel's edit box.

Note: the AmiNET STB can decode/view a single AVN series encoder stream or any URL without configuring the channels by simply typing in the appropriate string in the URL edit box at the top of each AmiNET STB web page and pressing <Retrun>/<Enter>.

Screenshot shows Channel Configuration page with three configured channels.

Channels 00-01 are set to decode **multicast** streams.

Channel 02 is set to decode a **unicast** stream. **(Please disregard screenshot for unicast below. It should read “udp://192.168.1.55:50698”)**

Channel 03 is set to display a web page.

Page loaded

Channels 0 to 10

00:	igmp://225.168.1.88:50688
01:	igmp://225.168.1.92:50696
02:	udp://:50670
03:	http://www.vsicam.com
04:	
05:	
06:	
07:	
08:	
09:	
10:	

Password: *****

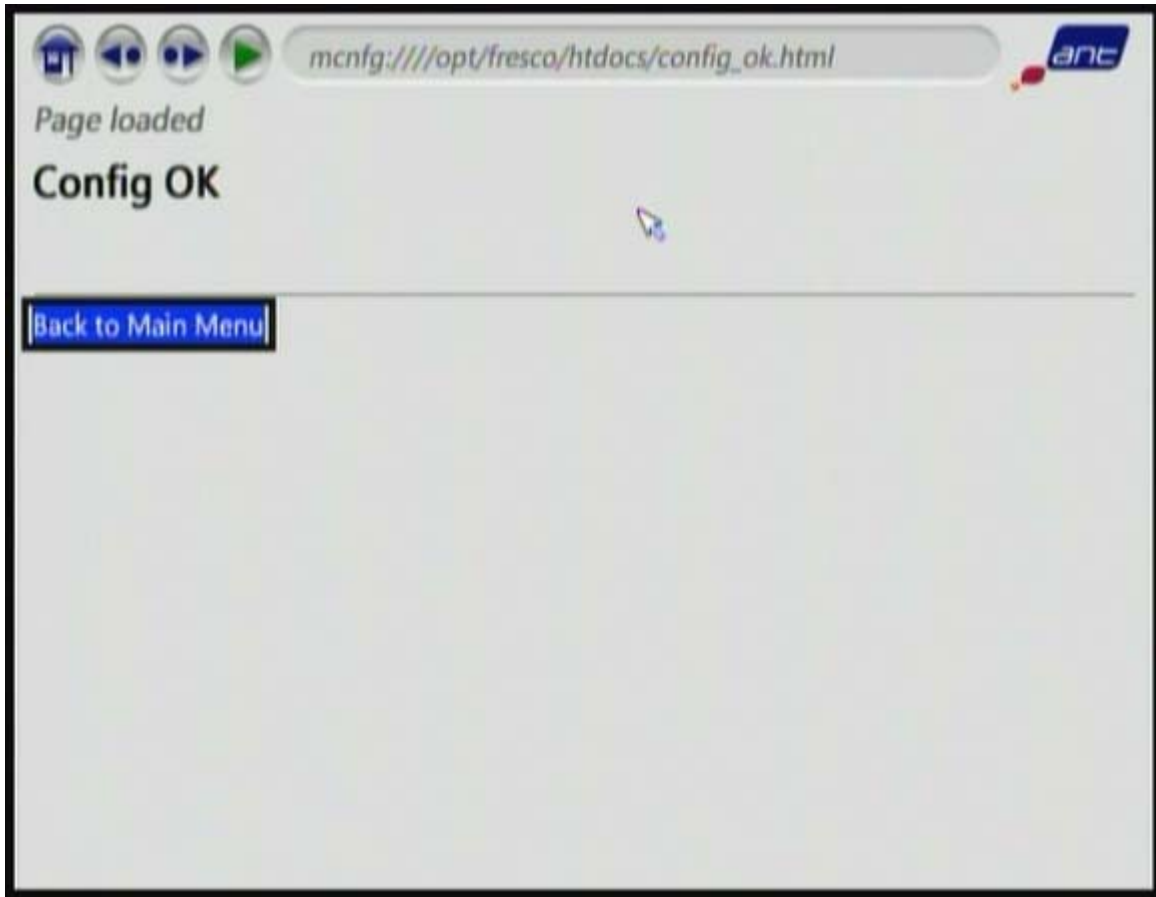
[Back to Channel editor](#)

[Back to Main Menu](#)

After configuring the channels as desired, scroll down to the bottom of the page, enter the correct Password (**snake** by default), and click the **<Submit>** button. The Config OK page should be displayed .

Step 9. Config OK Page

Click **<Return>/<Enter>** to return to the main page if desired.



Step 10. Configuring Auto Resume (optional)

Automatically refresh video after loss of power or network communication.

To configure the AmiNET STB to auto resume, following these steps:

Multicast

- a) Enter the Video Setup page. (Refer to Step 6.)
- b) Change the "No IGMP event timeout" and "IGMP End of media event timeout" to "0"(zero).
- c) Enter the Browser Setup page. (Refer to Step 5.)
- d) In the "Home Page" field, enter a text string describing the channel to be used during auto resume. The format of the text string is the same as that used during "Channel Configuration" (Ex: igmp://225.168.1.88:50688). This will set the default home page to the channel desired upon power up or resumption of network communications.
- e) In the "Help Page" field enter the following text string **about:/start.htm**. This will enable recovery from an infinite loop bug in AmiNET 130, 130H and 130M devices, caused when the home page address points to an inactive or unreachable stream/page. See the following Caution warning below:

****CAUTION****

If entering a new home page on the AmiNET 130, 130H, or 130M, it is **critical** to change/enter and save the following text into the Help Page editbox: **about:/start.htm** . There is a bug in the AmiNET firmware on these units, which can cause them to enter into an infinite and potentially un-correctable loop if the Home Page address is changed from “about:/start.htm” and the Help Page address is not modified as directed above. If for some reason the newly entered Home Page address is unreachable or not streaming, the device will enter into a loop and the only way to recover will be to select the Help button on the IR keyboard, assuming the Help Page address has been set to **about:/start.htm**. This will allow the user access into the device’s configuration menus. This malfunction may necessitate reprogramming of the unit by VSI. Reprogramming costs \$50 per unit plus shipping costs both ways.

Note: Make sure to **save all changes** with the correct Password (**snake** by default). To verify auto resume, remove the Ethernet cable from the STB, while running video, and then plug it back in to see if the video comes up automatically.

Unicast

- a) Enter the Video Setup page. (Refer to Step 6.)
- b) Change the "No UDP event timeout" and "UDP End of media event timeout" to "0"(zero).

For older units, with pre 0.9.0 firmware versions, please use the following unicast steps rather than a) and b) above.

In order to auto resume a Unicast stream in pre 0.9.0 firmware units, the STB must be tricked into thinking it is receiving a multicast stream. To do this, the channel configuration text string must be altered to look like a multicast configuration. Follow these steps first:

- a) Enter the Channels page. (Refer to Step 8.)
- b) Select "Edit Channel Range".
- c) Instead of using the Unicast text string (Ex: UDP://:<Destination Port>), you will use the multicast text string (IGMP://<Destination IP Address:<Destination Port>). (Refer to Step 8.) In this text string, the "Destination IP Address" will be a false address to trick the STB into thinking it is receiving a multicast transmission. You can use any multicast address here, such as 225.168.1.88. Valid multicast addresses range from 224.0.0.0 to 239.255.255.255. The port

number, however, has to match the "Destination Port" number configured into the encoder. The "Destination IP" address configured in the encoder should remain unchanged.

d) Once the above three steps are completed, follow the 4 steps given in the multicast section directly above (a-d).

Note: Make sure to **save all changes** with the correct Password (**snake** by default). To verify auto resume, remove the Ethernet cable from the STB, while running video, and then plug it back in to see if the video comes up automatically.

Step 11. Finished

The AmiNET STB is now configured to receive and decode the AVN series encoder streams. Use the AmiNET STB remote control to change to the configured channels and start viewing.

****** NOTE **** No RTP Support on AmiNET STBs.** The AmiNET STB can not decode AVN series encoder streams encoded with RTP encapsulation. Make sure the AVN series encoder streams have the Encapsulation setting configured to UDP.