

USING ENCODER CONTROL FOR SET-TOP BOX

VS-2002-ENC, VS-2004-ENC

ENCODER CONTROL FOR SET-TOP BOX

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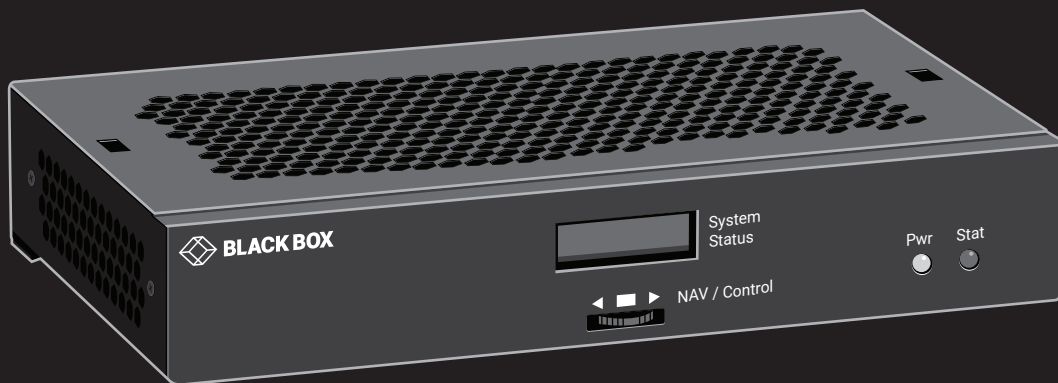


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ABOUT ENCODER CONTROL

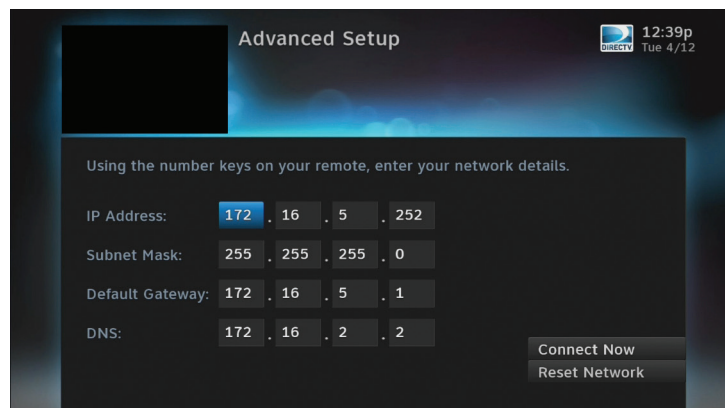
The Encoder Control functionality allows for simple control of H25 DirecTV receivers (also called set-top boxes) through the user interface.

To use Encoder Control, first you configure the set-top box and then you configure the user interface to manage the box.

NOTE: STB control requires the H25 receivers to be connected (via DECA) to an Ethernet switch along with the VS-2002-ENC/VS-2004-ENC Encoder units.

CONFIGURING THE H25 DIRECTV RECEIVER

You must configure every DirecTV box with a static IP address on the same subnet as the VS-2002-ENC/VS-2004-ENC Encoder device to ensure reliable communication between the two.



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1. Connect the H25 DirecTV receiver to a television and power on both the receiver and the television. Ensure the H25 is connected to a satellite feed.
2. Navigate through the settings to the Network Configuration Page and take the following steps:
 - a. Assign a unique IP address to each H25 unit. Note the IP address for easy reference later.
 - b. Set a default gateway.
 - c. Set a DNS server.
3. Navigate to the Whole-Home page and take the following steps:
 - a. Set External Access to Allow.
 - b. Set Current Program to Allow.
4. Navigate to the Video Settings Page and set the allowed resolutions to 1080i (or 720p) according to VS-2002-ENC/VS-2004-ENC Encoder product specifications.

NOTE: Setting the allowed resolutions for the Encoder products is optional, as the model will follow the input.

CONFIGURING THE USER INTERFACE FOR SET-TOP BOX MANAGEMENT

After configuring the set-top box, use the user interface to specify options for managing the units.

1. Connect to the user interface by entering the IP address in the browser.
2. Click the STB tab to navigate to the set-top box configuration and control page.
3. Set the IP address of the given set-top box in the IP Address field of the STB Device section. Once entered, click Apply and the page refreshes with the appropriate data from the set-top box (for example, Receiver ID and status information). To view and manage individual set-top box units, you need to enter the proper IP address for the given box in its associated input field.

If an IP address is not present in the STB IP Address field for a given input, the VS-2002-ENC/VS-2004-ENC Encoder unit does not enable remote management operations.

The screenshot shows the Black Box Network AV user interface. At the top, there is a navigation bar with tabs for Status, Channel Plan, IP Streaming, SSL/RTMP, AV Source, Device, Network, STB, Admin, Support, and About. The STB tab is selected. Below the navigation bar, there is a header with '1 connected' and 'No settings have been changed from their active values.' The main content area is a table with columns: System, Slot, Port, Name, Long Name, STB IP, Receiver ID, Access card #, STB Power (Config, Actual, Force), STB Channel (Config, Actual, Force), and STB Channel Names (Link, Call Sign, Program Name). The table contains four rows of data for VS-2004-ENC devices. The Receiver ID and Access card # fields are highlighted with a pink box. The Call Sign and Program Name fields are also highlighted with a pink box. Arrows point from these highlighted areas to the explanatory text below.

System	Slot	Port	Name	Long Name	STB IP	Receiver ID	Access card #	STB Power	STB Channel	STB Channel Names
								Config Actual Force	Config Actual Force	Link Call Sign Program Name
VS-2004-ENC	1		CNBCHD	Squawk on th	172.16.4.5	N/A	N/A	On N/A Disabled	365 N/A Disabled	Disabled N/A N/A
	2		MYTVHD	HD Video Ovi	0.0.0.0	N/A	N/A	On N/A Disabled	1 N/A Disabled	Disabled N/A N/A
	3		USAHD	Law and Ord	172.16.4.6	N/A	N/A	On N/A Disabled	242 N/A Disabled	Disabled N/A N/A
	4		NBCSHD	Underground	172.16.4.7	N/A	N/A	On N/A Disabled	220 N/A Disabled	Disabled N/A N/A

The fields on the STB tab page all contain values that live on the VS-2002-ENC/VS-2004-ENC Encoder unit.

The Call Sign Name, Program Name, Receiver ID, and Access Card values are all updated and displayed at regular intervals. These are informational and helpful to determine which STB is connected.

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MANAGING THE SET-TOP BOX

Once you have programmed the IP addresses of the connected set-top boxes through the boxes themselves and through the user interface, information from each managed unit such as power status (on/off), current channel, and program information is pulled into the STB tab. This information updates approximately every 5 to 10 seconds.

You can now control the following options on the STP page:

Force mode

When enabled, the associated STB participates in periodic and automatic queries that set the unit to the configuration specified in the user interface. The cycling occurs approximately every 5 to 10 seconds, on a free-running basis with no user intervention required.

The screenshot shows the Black Box Network AV interface. At the top, there is a navigation bar with tabs for Status, Channel Plan, IP Streaming, SSL/RTMP, AV Source, Device, Network, STB, Admin, Support, and About. Below the navigation bar, there is a section for STB management. The main content area displays a table of STB devices. The table has columns for System, Slot, Port, Name, Long Name, STB IP, Receiver ID, Access card #, STB Power (Config, Actual, Force), STB Channel (Config, Actual, Force), and STB Channel Names (Link, Call Sign, Program Name). The 'VS-2004-ENC' device is selected, and its settings are visible in the table. A pink box highlights the 'Force' field in the STB Power section, with arrows pointing to the 'Force mode' text above.

System	Slot	Port	Name	Long Name	STB IP	Receiver ID	Access card #	STB Power	STB Channel	STB Channel Names						
								Config	Actual	Force	Config	Actual	Force	Link	Call Sign	Program Name
1 selected			Set All	Set All				Set All		Set All			Set All	Set All		
VS-2004-ENC		1	CNBCHD	Squawk on th	172.16.4.5	N/A	N/A	On	N/A	Disabled	365	N/A	Disabled	Disabled	N/A	N/A
		2	MYTVHD	HD Video Owl	0.0.0.0	N/A	N/A	On	N/A	Disabled	1	N/A	Disabled	Disabled	N/A	N/A
		3	USAHD	Law and Ord	172.16.4.6	N/A	N/A	On	N/A	Disabled	242	N/A	Disabled	Disabled	N/A	N/A
		4	NBCSHD	Underground	172.16.4.7	N/A	N/A	On	N/A	Disabled	220	N/A	Disabled	Disabled	N/A	N/A

If using STB management on the third-party STB device, all media modules require a valid IP address to be set via the network tab. The IP address can either be static or via DHCP.

STB CHANNEL NAMES

You can assign the Call Sign and Program Name to a VS-2002-ENC/VS-2004-ENC Encoder channel using the Link option in the STB Channel Names section. These fields populate automatically as do all the fields from a VS-2002-ENC/VS-2004-ENC Encoder unit when the set-top box is assigned to it.

If you enable the Link function, the Call Sign (for example, CNBCHD) will be used for the VS-2002-ENC/VS-2004-ENC Encoder Channel Name field and Program Name (for example, Closing Bell) will be used for the Long Channel Name field. You cannot edit these fields when the Link option is enabled.

To link STB Channel Names with program information:

1. Click in the Link field and choose enabled or disabled.
2. Click Apply to save.

STB POWER

In the STB Power section, you can power individual units on or off. The "on" or "off" text in the Actual field indicates the current state of the set-top box for the specified input port (on the VS-2002-ENC/VS-2004-ENC Encoder unit).

In the STP power section:

1. Click in the Config field and choose on or off.
2. (optional) Click in the Force field to enable (or disable), the associated set-top box to "force" the setting you specify. With Force enabled, the user interface will query the box automatically and periodically and set the command to your configuration. For example, if the set-top box is turned off, yet it's configured in the user interface as "on," an enabled Force sends a command to set the power on to match the the user interface setting.

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3. Click Apply to save.

The entire block of set-top box units under management can be controlled simultaneously by clicking Set All option at the top of the column.

STB CHANNEL NUMBER

In the STB Channel Number section, you can set the desired channel number to be sent to the set-top box. The number in the Actual field indicates the current channel set to the STB for the specified input port (on the VS-2002-ENC/VS-2004-ENC Encoder unit).

To set STP channel numbers:

1. Click in the Config field and enter the desired channel number for the STB.
2. (optional) Click in the Force field to enable (or disable), the associated set-top box to “force” the setting you specify. With Force enabled, the user interface will query the box automatically and periodically and set the command to your configuration. For example, if “242” appears in the Actual field, yet it’s configured in the user interface as “142,” an enabled Force sends a command to set the channel to 142 to match the the user interface setting.
3. Click Apply to save.

The currently active channel number the STB uses may vary from the configured value because of events at the STB (reconfiguration, STB firmware download, etc.). If “Force” is enabled, that condition corrects at the next automatic interval. If not in Force mode and there is a mismatch, the STB channel number can be manually resent to be corrected.

If the user interface detects a mismatch between the configured channel and the actual active channel at the STB, a triangular warning flag will be displayed next to that value.



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