



Enhancing Your Subscriber's Experience

SARA Configurable Options

Please Read This Entire Guide

Important

Please read this entire guide. If this guide provides installation or operation instructions, give particular attention to all safety statements included in this guide.

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Preface

About This Guide

Introduction

As a cable service provider, you want to make your service appeal to your subscribers. The configurable options of the Cisco Resident Application (SARA) allow you to customize the application to best suit your subscribers' needs. The purpose of this guide is to provide a comprehensive list of the SARA 1.60, SARA HD 1.60, and SARA DVR 1.5.2 configurable options with recommendations on how to configure each option. These options apply to all Cisco set-tops operating with SARA and the SARA Application Server 3.4.1.

Note: The information in this guide represents current operation for the SARA software versions listed above. Any previous documentation regarding enhancing your subscribers' experience should be replaced with this guide.

Audience

This guide has three audiences. One audience is the marketing department. This audience is concerned with the look and feel of the application and making it enticing to users. First, the marketing department decides which of the configurable options they want to offer to their subscribers. The second audience is the Customer Support Representatives (CSRs) who are concerned with how much effort it will take to support each option. Both the marketing department and CSRs should look at how many packages they offer to determine which options to support. They should also consider how to group channels and interlace them. The third audience is the Digital Network Control System (DNCS) operator who must configure the options on the DNCS. We provide step-by-step instructions on how to configure the options.

Scope

To help you configure the options, this guide provides the following information:

- Chapter 1 provides a brief description of the options that you can configure for SARA by functional area. This chapter also provides information to help you choose the best method for sending a configuration (global, addressable, hub-specific, or staging defaults).
- Chapters 2 through 16 provide step-by-step instructions for setting each option and more detailed information about each option. The chapters are organized by functional area to help you quickly find options. For example, all audio options are listed in Chapter 2, **Audio Options**.
- Appendix A provides a conversion table for converting an Entitlement ID (EID) to a decimal value. Several of the procedures in this guide require that you use the EID as part of a Service Application Manager (SAM) service to authorize a service.
- Appendix B provides a list of all the Quick and General Settings available for your set-top and a form that you can use to record your configuration.

About This Guide, Continued

Related Publication

You may find the following publications useful as you implement the procedures in this document. The publish dates for these documents are valid as of this printing. However, some of these documents may have since been revised:

- *Configuring Logos on the DNCS* (part number 738163, expected publish date: early 2007)
- *Configuring Your DBDS to Support DVR and DVD* (part number 4011411, expected publish date: early 2007)
- *CoolTools Utilities User's Guide* (part number 749640, published October 2004 [revision expected date: early 2007])
- *Digital Network Control System Online Help for System Release 2.7/3.7/4.2 ([PCVersion]* part number 4012121, published December 2006)*
- *LogoTool Software User's Guide* (part number 4000820, expected publish date: early 2007)
- *SARA Application Server 3.4.1 User's Guide* (part number 4012159, published December 2006)

**The Digital Network Control System Online Help (UNIX) for System Release 2.7/3.7/4.2 should already be installed on your DNCS. The PC version is a separate CD that allows you to view the same online Help on a PC separate from the DNCS workstation.*

About This Guide, Continued

Document Version

This is the second release of this guide. In addition to minor text changes, this guide includes the following new information.

New Information	See...
• Added a procedure for resetting user settings. • Updated the What Can You Configure for SARA section with new options that have been added since the last revision. See individual chapters for details.	Chapter 1
• Added information on HDMI® under the Audio Options. • Added a procedure for disabling audio and video synchronization. • Moved the procedure for selecting the language for the wireless keyboard to this chapter.	Chapter 2
Added information on setting up dual sources and hiding services from CableCARD™ hosts.	Chapter 3
Added a chapter on the high-definition options that includes information on using the HD flag for HD and HD PPV services.	Chapter 5
Added a chapter on the logo options that you can configure.	Chapter 7
Added a chapter on the options that you can configure for the look, feel, and navigation of SARA. This chapter includes the following information: • Choosing a color scheme for SARA • Using the numeric keys on the remote control for the General Settings menu • Specifying how numeric keys respond on the IPG • Selecting a language for SARA screens • Allowing subscribers to change channels from the scaled video	Chapter 8
Added a chapter on the Music Channel options.	Chapter 9
Revised the Parental Control information to include blocking the titles of programs that have been blocked with Parental Control settings.	Chapter 10

Continued on next page

About This Guide, Continued

New Information	See...
Added a procedure for changing the look and feel of the PPV screen background.	Chapter 11
Added a procedure for powering on the set-top with numeric keys.	Chapter 12
Removed information on configuring the DVR. This information has moved to the <i>DVR and DVD Configuration Guide</i> , part number 4011411.	Chapter 13
Added a procedure for configuring the set-top to respond to the A, B, GUIDE, MENU, POWER, and PPV keys for launching services.	Chapter 14
Added a detailed list of all the Quick and General Settings available for your set-top. A form is also provided that you can use to record your configuration.	Appendix B

Chapter 1

Configuring SARA to Enhance Your Subscribers' Experience

Overview

Introduction

As a cable operator, you want to keep your subscribers happy and attract new subscribers. Now more than ever, you must get to know your subscribers to help you develop the best and most appealing products. The configurable options of the Cisco Resident Application (SARA) allow you to customize the application to best suit your subscribers' needs.

Before you configure SARA for your subscribers, think about the options that your subscribers will find most appealing. This chapter provides a list of the options that you can configure for SARA to best suit your subscribers' needs.

Note: When you change the configuration of SARA, it often affects your subscribers' experience with SARA and can generate support calls. The marketing department, engineering, and the CSRs must communicate with each other to determine the best SARA configuration and they must prepare for questions resulting from changes that are made.

How Do You Configure SARA?

SARA uses a standard set of default parameters that define the way the set-top operates. You can change this default configuration and provide only the features that your subscribers will use most often. The Explorer® set-top is also referred to as a Digital Home Communication Terminal (DHCT). The acronym DHCT appears on several of the graphical user interfaces that you use to configure the set-top. For example, the set of parameters that control how the set-top operates is called a DHCT configuration. The DHCT configuration affects the subscriber's experience with SARA.

Overview, Continued

You use the SARA Application Server to set up and send a DHCT configuration to the appropriate set-tops in any of the following ways:

- For all set-tops in the network (*global configuration*)
- For a single set-top (*addressable configuration*)
- For all set-tops in a specific hub (*hub configuration*)
- During the staging process, so that all set-tops receive the default configuration when they are staged (*staging defaults*)

This chapter provides a brief description of the options you can configure for SARA by functional area. This chapter also provides information to help you choose the best method for sending a configuration (global, addressable, by hub, or staging defaults).

Use the form in Appendix B to fill in the configuration options that you have made for your system. You can keep the form as a handy reference.

Coordinate With Your Billing System

You can send some operating parameters (such as PIN numbers) to the set-top through either a DHCT configuration or through the billing system. To avoid sending conflicting instructions to the set-tops, be sure to coordinate with your billing system administrator on how you want to set up the operating parameters.

A Note About DNCS Settings

Policy decisions that you make for Global Defaults affect the choices that you will see for Staging Defaults and set-top menus. The main distinction is whether a control is made visible to the subscriber or hidden from the subscriber. For any setting that you hide from the subscriber, the operation is determined by the setting in the Set Up Global DHCT Configuration window. For any setting that you make visible to the subscriber, a default must be established in the Set Up Staging Defaults windows so that the desired operation occurs for those subscribers who have not accessed these settings.

Note: There are some exceptions to these general guidelines that are noted in the sections where they occur.

SAM Service Updates

The time it takes to update a SAM service is configurable at the DNCS. The default value is 10 minutes. For more information on setting the SAM service update time, go to the online Help on the DNCS and select **SAM**.

Overview, Continued

In this Chapter

This chapter contains the following topics.

Topic	See Page
What Can You Configure for SARA?	1-4
Where Are the Options on the SARA Application Server?	1-30
Choose a Method for Sending a Configuration to Set-Tops	1-31
Send a Global Configuration to All Set-Tops in Your Network	1-33
Set Staging Defaults	1-37
Build and Send a Configuration to All Set-Tops in a Single Hub	1-39
Send a Configuration to a Single Set-Top	1-48
Reset User Settings	1-51
Configure SARA for Your Subscribers	1-53

What Can You Configure for SARA?

List of Configurable Options

To find out what you can configure for SARA from the SARA Application Server, refer to the table in this section for a high-level look at the options. The options are grouped alphabetically by functional area. For example, the options that you can configure for Parental Control are grouped under the heading **Parental Control**. A recommended and an alternate setting for each option are also provided. For more detailed information about each option, refer to the individual chapter in this guide that corresponds to the functional area for that option. Page references are provided.

Legend

- When applicable, a cross-reference to the option name, as it appears in the graphical user interface (GUI) of the SARA Application Server, is provided.
- To make the page easy to skim, any preferred settings are presented in **bold** for both the Recommended Setting and for the Alternate Setting.
- Options that are configured by adding a Service Application Manager (SAM) service or adding a behavior tag to a SAM URL are noted. Some of these options apply to all set-tops while others apply to only specific set-top types.
- In the few instances when there is no recommended setting and the choice is purely a matter of personal preference, we indicate all options as equally valid, and list not applicable (N/A) in the Alternate Setting column.

What Can You Configure for SARA?, Continued

Audio Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Select a preferred audio language for digital services. See page 2-2.	Language: Audio	Enable this option to allow subscribers to use the General Settings menu to set the default language that the set-top will use when tuning to digital channels.	If you disable this feature, subscribers must choose the language setting from the Quick Settings menu. For DVRs in this configuration, choosing the language from the Quick Settings menu makes that language become the default language for all channels. For non-DVR set-tops in this configuration, choosing the language from the Quick Settings menu is only temporary. A channel change causes the language to revert to the primary audio stream.
Send a Dolby® Digital signal or an uncompressed signal to the digital audio output on the set-top. See page 2-5.	Audio: Digital Output	Enable this option to allow subscribers to select the format for the digital audio output on the set-top. They can choose among a Dolby Digital signal, an uncompressed signal (Other), or HDMI for set-tops with an HDMI output.	If you disable this feature, subscribers cannot select the digital audio output on the set-top. You must select the output for your subscribers. Dolby Digital is the preferred setting.
Select the best audio range for TV viewing or home theater systems. See page 2-8.	Audio: Range	Disable this feature to prevent subscribers from selecting the audio range. You must select the audio range for your subscribers. Narrow is the preferred setting.	If you enable this option, subscribers can select the audio range.

What Can You Configure for SARA?, Continued

Audio Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Adjust the volume from either the TV or the set-top. See page 2-11.	Audio: Volume Control	Disable this feature to prevent subscribers from choosing which device adjusts the volume. You must choose whether the set-top or TV controls the volume for your subscribers. Fixed is the preferred setting. If you select Fixed, the subscriber is forced to adjust the volume using the TV.	If you enable this option, subscribers can choose whether the set-top (variable) or the TV (fixed) adjusts the volume. When subscribers select fixed, they must use the TV to adjust the volume. When subscribers select variable, they may use the set-top to adjust the volume.
Allow subscribers to select the audio source for any program that provides an alternative audio track or to enable SAP for analog services. This option behaves differently for digital and analog services. See page 2-15.	Has SAP (Secondary Audio Program) Note: This option enables the Has SAP selection to appear on the Quick Settings menu.	Enable this option to allow subscribers to select a different audio source for digital services or to enable SAP for analog services.	If you disable this feature on the Quick Settings menu, subscribers can still enable SAP from the General Settings menu.
Disable Audio and Video Synchronization for individual services by using the NOAVSYNC behavior tag. See page 2-17.	Disable Audio and Video Synchronization Note: This option is not supported for either the 3250HD or DVR set-tops.	Add a NOAVSYNC behavior tag to an existing SAM URL for a service for which you want to disable audio and video synchronization.	N/A

What Can You Configure for SARA?, Continued

Audio Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Choose the default language that the wireless keyboard will use to communicate with the set-top. See page 2-19.	Keyboard Language	Choose the language that is most common for your area.	N/A
Show volume on LEDs when the subscriber adjusts the volume with the set-top. See page 2-22.	Show Volume on LEDs During Update	Enable this option to display the volume level (0-30) on the LED of the set-top as the subscriber adjusts the volume. The Audio: Volume Control option must be set to variable if you enable this option.	If you disable this feature, the volume level is not displayed on the LED of the set-top as the subscriber adjusts the volume.

What Can You Configure for SARA?, Continued

Channel Selection Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
When a subscriber enters an invalid channel number, display the next highest authorized channel. See page 3-3.	Invalid Numeric Entry Chooses Next Highest Channel	Enable this option to allow invalid channel number entry to tune the set-top to the next highest authorized channel.	If you disable this feature, when subscribers enter an invalid channel number, the Info banner displays question marks, and the invalid channel number blinks on the LED of the set-top. The number of question marks displayed depends on the Number of LED Digits setting.
Skip unauthorized channels while channel surfing. See page 3-5.	Skip Unauthorized Channels	Enable the option to allow the set-top to skip unauthorized channels when subscribers press Up and Down on the remote to go through the channel lineup.	If you disable this feature, the set-top will not skip unauthorized channels. Instead, the set-top will stop on unauthorized channels when subscribers press Up or Down on the remote, and the “unauthorized service” text appears on the screen.
Select the channel that the set-top tunes to at power on. See page 3-7.	Power On Channel	Enable this option to allow subscribers to select which channel the set-top tunes to when powered on.	If you disable this feature, subscribers cannot select their power on channel. You must select the power on channel for your subscribers.
Specify the number of digits the subscriber must enter to change channels on the set-top. See page 3-12.	Number of Digit Entry	4 Digits	3 Digits

What Can You Configure for SARA?, Continued

Channel Selection Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Designate channel 3 or 4 for the set-top RF output channel. See page 3-13.	RF Output Channel	Disable this option to prevent subscribers from selecting the set-top RF output channel. You must select channel 3 or 4 as the RF output channel for your subscribers. Choose the RF output channel that is best for your environment.	If you enable this feature, subscribers can choose channel 3 or 4 for the set-top RF output.
Specify how the LAST key functions on the remote control. See page 3-16.	LAST Key Uses Channel Up/Down	Enable the option to cause the LAST key to display the last channel that the subscriber tuned to regardless of whether the channel was directly tuned or tuned to by pressing the CH+ or CH- keys (also known as surfing)	If you disable this feature, the LAST key displays the last channel that the subscriber directly tuned to by entering the channel numbers (not pressing CH+ or CH-) on the remote control.
Allow subscribers to access the Favorite Channel list from the Quick Settings menu. Subscribers can use the Favorite Channels list to add or remove the currently tuned channel from the list. See page 3-18.	Has Favorite	Enable this option to make the Add or Remove Favorite Channels feature available on the Quick Settings menu.	If you disable this feature, the Favorite Channels must be configured from the General Settings menu.
Allow set-tops and CableCARD™ hosts to tune to different sources. See page 3-19.	Set Up Dual Sources	Add a CCCM_SRC=#### modifier to the existing Application URL (where #### is the source ID of the service that you want the CableCARD host to display.	N/A
Hide services from CableCARD hosts. See page 3-19.	Hide Services from CableCARD hosts	Add a NO_CCCM modifier to the Application URL.	N/A

What Can You Configure for SARA?, Continued

Front Panel Display Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Display the time of day or a blank screen on the front panel of the set-top when powered off. See page 4-3.	Display Power Off	Enable this option to allow subscribers to choose what is displayed on the front panel of the set-top when powered off.	If you disable this feature, subscribers cannot choose what is displayed on the front panel of the set-top when powered off. You must choose the front panel display for your subscribers. We recommend that you display the time of day.
Display the time of day or channel number on the front panel of the set-top when powered on. See page 4-6.	LED Channel Switch	Enable this option to allow subscribers to choose what is displayed on the front panel of the set-top when powered on.	If you disable this feature, subscribers cannot choose what is displayed on the front panel of the set-top when powered on. You must choose the front panel display for your subscribers. We recommend that you display the time of day, except when tuning. When tuning, display the channel number.
Specify what the LED displays on the front panel of the set-top when a subscriber tunes to a channel that requires a PIN. See page 4-9.	Enable PIN on LEDs	Disable this feature to cause the set-top to display the time of day or channel number on the LED of the set-top when the PIN entry screen is displayed on the TV.	If you enable this feature, the word Pin is displayed in the LED any time the PIN entry screen is displayed on the TV.

What Can You Configure for SARA?, Continued

Front Panel Display Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Specify the minimum number of digits to display for channels in the LED on the front panel of the set-top. This setting determines whether the set-top adds leading zeroes for channels that use less than the specified minimum number of LED digits. For example, if this option is set to 2, then channel 2 is displayed as 02. See page 4-10.	Number of LED Digits	1, 2, 3, or 4 Digits Note: The highest channel number supported is 1999.	N/A

High-Definition Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Avoid black screens on HD channels when tuned using a non-HD set-top. See page 5-2.	HD behavior tag to identify a service as HD	Add the ;HD behavior tag to all existing broadcast HD services and to PPV services that are broadcasting HD content. The HD tag identifies the service as HD and causes subscribers with non-HD set-tops to see an alert that the service is in HD.	N/A Caution: If you do not add an HD behavior tag to HD services or PPV services that broadcast HD content, undesirable behavior can occur on the 3100HD and on non-HD set-tops.

What Can You Configure for SARA?, Continued

Interactive Program Guide Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Show the C button with descriptive text on the Interactive Program Guide. See page 6-3.	Show C button	Enable this option to show the C button on the Interactive Program Guide with a label. We recommend that you use the return arrow.	If you disable this feature is disabled, the C button is not displayed on the Interactive Program Guide.
Show the currently tuned channel number, date, and time on the Interactive Program Guide (This information is called the “Where am I” banner.) See page 6-5.	Show Tuned Channel Banner	Enable this option to display the “Where am I” banner on the Interactive Program Guide. Note: The “Where am I” banner is more useful when you have Channel Changing enabled for the Scaled Video. See Enabling Channel Changing in the Scaled Video in this guide. However, you may still use the banner even if you do not enable channel changing in the scaled video.	If you disable this feature, the “Where Am I” banner is not displayed on the Interactive Program Guide.
Display either the Quick Settings menu or the General Settings menu from the Interactive Program Guide. See page 6-6.	SETTINGS Key from the IPG	Display the Quick Settings menu from the Interactive Program Guide.	Display the General Settings menu from the Interactive Program Guide.
Show a pay-per-view (PPV) icon for channels in the Interactive Program Guide that offer PPV or Impulse PPV (IPPV) programming. See page 6-7.	Show PPV Icon	Enable this option to show the PPV icon on the Interactive Program Guide.	If you disable this feature, the PPV icon is not displayed on the Interactive Program Guide.

What Can You Configure for SARA?, Continued

Interactive Program Guide Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Specify how the Interactive Program Guide shows the program data the first time the subscriber accesses the guide. The Interactive Program Guide can show the data by time, theme, or title. See page 6-8.	Browse by	Show the information in the Interactive Program Guide by time . When the subscriber displays the IPG, the channel number appears on the left and the programs are sorted by time.	Show the information in the Interactive Program Guide by title or theme . If you choose title, the programs are sorted by title. If you choose theme, the programs are sorted by theme. For example, all the dramas are listed together.
Find programs in the Interactive Program Guide by time, theme, or title. (This feature is called the Browse by menu.) See page 6-9.	Display "Browse by" menu	Enable this option to display the Browse by menu on the Interactive Program Guide.	If this feature is disabled, the Browse by menu is not displayed on the Interactive Program Guide.
Specify how soon before each half-hour period that the Interactive Program Guide automatically scrolls to the next half-hour slot. See page 6-10.	IPG scrolls	10 Minutes	30 Minutes
Specify what happens when the subscriber presses a numeric key on the remote control while the Interactive Program Guide is displayed. See page 6-11.	Numeric Key Response	Select the Switch to Time View, highlight channel option. When subscribers press a numeric key, the guide changes to Time View (if not already in Time View) and highlights the channel that was entered.	Select the Exit IPG, tune to channel option. When subscribers press a numeric key on the remote control, the guide disappears and the set-top tunes to the channel number that was entered.

What Can You Configure for SARA?, Continued

Interactive Program Guide Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Adjust how set-tops use IPG memory. See page 6-13	Memory Usage	Use default settings	Customize settings
Make the Interactive Program Guide available to all subscribers. See page 6-17.	Allow IPG Authorization By Package	Disable this option if you do not charge for the Interactive Program Guide. If this feature is disabled, no package is required to authorize the guide, and all subscribers can view it.	If you enable this feature, you must also select the package that will be used to authorize the Interactive Program Guide. Subscribers must be authorized for this package to view the Interactive Program Guide.

Logo Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Position my logo on the Interactive Program Guide. See page 7-2.	MSO Logo Position	We recommend that you use an MSO logo. You can place the logo to the left or right of the channel number and service logo. Choose a logo position that works best for you.	If you do not use a logo, the position option does not apply.

What Can You Configure for SARA?, Continued

Look, Feel, and Navigation Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Choose a color scheme for SARA screens. See page 8-2.	Color Scheme	Enable this option to allow subscribers to choose the color scheme for SARA screens.	If you disable this option, subscribers cannot choose the color scheme for SARA screens. You must choose the color scheme for your subscribers.
Use the numeric keys on the remote control to set values on the General Settings menu. See page 8-5.	Numeric Key Chooses Channel	Enable this option to allow subscribers to use the numeric keys on the remote to set values. For example, when configuring Favorite Channels, the subscriber can enter a channel number rather than scrolling through a list of channel numbers.	If you disable this feature, the numeric keys are disabled for options on the General Settings Menu. The subscriber must press the UP and DOWN Arrow keys or the PAGE + and PAGE – key to set values.
Select the language for SARA screens. See page 8-6.	Language:Screen	Enable this option to allow subscribers to select the screen language for SARA screens under Language:Screen.	If you disable this feature, subscribers cannot select the screen language. You must select the language for your subscribers.

What Can You Configure for SARA?, Continued

Look, Feel, and Navigation Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Allow subscribers to change channels from the scaled video in the Interactive Program Guide and some other applications. When this feature is enabled and the CH+ and CH– keys are pressed, the scaled video goes to the next channel. See page 8-9. Note: Applications such as InView and Services Portal support this feature while others may not.	Channel Changing from the Scaled Video	Create a _QTR SAM service to allow subscribers to change channels from the scaled video. If you use this service, pressing the CH+ and CH– keys while in the Interactive Program Guide causes the scaled video to change. Note: If you allow subscribers to change channels from the scaled video, we recommend that you enable the Show Tuned Channel Banner option. See Show the Current Channel Number, Date, and Time on the Interactive Program Guide in Chapter 6.	If you do not create a _QTR SAM service, pressing the CH+ and CH– keys exits the guide.

What Can You Configure for SARA?, Continued

Music Channel Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Choose a screen saver for the music channels. See page 9-2.	Music Screen Saver	This setting applies only if you are using the music application. Use any of the screen saver options except -none-.	Select -none- for the screen saver. Note: If you do not choose a screen saver, this could result in screen burn in for subscribers who tune to a music application for extended periods of time.
Display title, track, artist information, and promotional text when you use the music application. See page 9-4.	Display Text Along with Music Data	This setting applies only if you are using the music application to present audio services to your subscribers. Enable this option if the music provider you are using supplies text information with the audio content.	If you do not want to display text with music, disable this option. In this configuration, the text provided with the audio is not displayed with a music application.

What Can You Configure for SARA?, Continued

Parental Control Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Allow your subscribers to unlock an individual program, channel, or block of time with a PIN without affecting other Parental Control settings. (This feature is called Restricted Unblocking.) See page 10-10.	Blocked Barker Allows Restricted Unblocking	Enable this option to allow restricted unblocking.	If you disable this feature, restricted unblocking is not available to your subscribers.
Block programs by rating. See page 10-12.	Block:Rating	Enable this option to allow subscribers to block programs by rating.	If you disable this feature, subscribers cannot block programs by rating.
Block programs by time. See page 10-13.	Block:Time	Enable this option to allow subscribers to block programs by time.	If you disable this feature, subscribers cannot block programs by time.
Block Channels from the Quick Settings menu. See page 10-14.	Has Block This Channel	Enable this option to allow subscribers to block channels from the Quick Settings menu.	If you disable this feature, subscribers cannot block channels from the Quick Settings menu.
Turn Parental Control on or off from the Quick Settings menu. See page 10-15.	Has Blocking	Enable this option to allow subscribers to turn Parental Control on and off from the Quick Settings menu.	If you disable this feature, subscribers cannot turn Parental Control on and off from the Quick Settings menu.

What Can You Configure for SARA?, Continued

Parental Control Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Specify the channels that are blocked for all subscribers. See page 10-16.	Blocked Channel Number	Select the Channel Number(s) option and enter the channels that you want to block for all subscribers. Type in the channel number with a comma between each number, or you can type in a range of numbers, such as 1-4.	If you select None for this option, the set-top is delivered to the subscriber with no channels blocked.
Automatically block programs with a certain rating during staging. See page 10-18.	Block Programs Rated	Enable this option to block programs with a certain rating during the staging process. Enter the rating that you want to block, and all programs with this rating and more restricted ratings will be blocked.	If you disable this option, you do not want to block any ratings during the staging process.
Prevent the titles of blocked programs from showing on the Interactive Program Guide, Recorded List, Scheduled Recordings, and Recorded Program Options screens. See page 10-19.	Block Titles	Enable this option to display "Title Blocked" on the IPG, Recorded List, Scheduled Recording, and Recorded Programs Options screens for programs that have been blocked by the Parental Control feature.	If you disable this option, the title of any program that is blocked by the Parental Control feature will be displayed on the IPG and on the Recorded List, Scheduled Recording, and Recorded Programs Options screens.

What Can You Configure for SARA?, Continued

Parental Control Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Specify whether you lock out all PIN entries after a subscriber enters an incorrect blocking PIN multiple times in a specified time frame. See page 10-20. Example: Assume the Lockout is set to 10 minutes, the Trial Timer is set to 10 minutes, and the Invalid Tries is set to 3. In this scenario, if the subscriber enters three incorrect blocking PINs in less than 10 minutes, all blocking PIN entries are locked out for 10 minutes.	Enable Blocking PIN Lockout	Enable the lockout.	Disable the lockout.
Specify the length of the timer (in minutes) that starts when a subscriber enters an incorrect blocking PIN. If subscribers try too many times to enter the PIN before the timer runs out, then the set-top locks out the channel. See page 10-22.	Blocking PIN Trial Timer	10 Minutes	2 Hours
Specify how many times subscribers can try to enter an incorrect blocking PIN in a specified time frame before being locked out from the channel. See page 10-24.	Blocking PIN Invalid Tries	3 Tries	2 Tries

What Can You Configure for SARA?, Continued

Parental Control Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Specify the length of time (in minutes) to lock out a channel after subscribers enter an incorrect blocking PIN too many times in a specified time frame. See page 10-26.	Blocking PIN Lockout Time	10 Minutes	30 Minutes
Provide an appropriate telephone number on the barker screen when a channel is locked out. See page 10-29.	PIN Call Number	Use the Customer Service phone number on the barker screen.	N/A

Pay-Per-View and Impulse Pay-Per-View Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Provide an appropriate telephone number on the purchase or channel barker for subscribers to call if they have problems purchasing IPPV events. See page 11-2.	Purchase Problem Phone	Use the Customer Service phone number on the barker.	N/A
Specify the day of the month when past purchases are removed from the PPV purchase list on the General Settings menu of the set-top. See page 11-3.	Past Purchase Day	Remove the past purchases on the <i>first</i> day of the billing cycle.	Remove the past purchases on the <i>last</i> day of the billing cycle.

What Can You Configure for SARA?, Continued

Pay-Per-View and Impulse Pay-Per-View Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Specify whether all PIN entry is locked out after subscribers enter an incorrect purchase PIN multiple times within a specified period of time. See page 11-4. Example: Assume the Lockout is set to 10 minutes, the Trial Timer is set to 30 minutes, and the Invalid Tries is set to 3. In this scenario, if the subscriber enters 3 incorrect purchase PINs in less than 30 minutes, all purchase PIN entries are locked out for 10 minutes.	Enable Purchase PIN Lockout	Enable the lockout.	Disable the lockout.
Specify the length of time (in minutes) that all PPV services will be locked out if a subscriber enters an incorrect purchase PIN too many times in a specified time frame. See page 11-6.	Purchase PIN Lockout Time	10 Minutes	30 Minutes
Specify the length of the timer (in minutes) that starts when subscribers enter an incorrect purchase PIN. If the subscriber tries too many times to enter the PIN before the timer runs out, then all PPV services are locked out. See page 11-8.	Purchase PIN Trial Timer	30 Minutes	2 Hours

What Can You Configure for SARA?, Continued

Pay-Per-View and Impulse Pay-Per-View Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Specify how many times subscribers can try to enter an incorrect purchase PIN in a specified time frame before all PPV services are locked out. This feature prevents an unauthorized user from trying to guess the PIN. See page 11-10.	Purchase PIN Invalid Tries	3 Tries	2 Tries
Change the look and feel of the PPV screen background from the traditional graphical background to a solid background. See page 11-12.	PPV Screen Background	Graphical	Solid

Power On and Off Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Supply power to the AC outlet on the set-top. See page 12-2.	AC Outlet Control	Enable the option to allow subscribers to choose whether the AC outlet on the set-top is always on or turns on and off with the set-top.	If you disable this feature, subscribers cannot choose whether the AC outlet on the set-top is always on or turns on and off with the set-top. You must choose the setting for all of your subscribers. We recommend that you turn the AC outlet on and off with the set-top.
Determine the keys that can be used to power on the set-top. See page 12-5.	Set: Power-On Note: This feature is available for staging and addressable configurations only.	The Power option enables <i>only</i> the Power key to power on the set-top.	The Power and Numeric option enables <i>both</i> the Power key and any numeric key to power on the set-top.

What Can You Configure for SARA?, Continued

Power On and Off Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Watch analog channels while the set-top is powered off. The Bypass When Off feature controls whether the RF broadcast signal should bypass the set-top and go directly to the TV when the set-top is powered off so that subscribers can watch analog channels even though the set-top is powered off. (This feature requires that the set-top has an RF Bypass module and a cable-ready television.) See page 12-7.	Bypass When Off	Enable this option if you offer the RF bypass switch to your subscribers.	If you disable this feature, you do not want to offer the RF bypass switch to your subscribers.

Program Recording Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Make the VCR Commander™ service available to all subscribers who have a VCR Commander module. See page 13-3.	Allow VCR Commander Authorization by Package	Enable this option if you want to use a package to authorize the VCR Commander service.	If you disable this option, no package is required for the VCR Commander service.
Display a VCR Commander barker when a subscriber tries to record a program on the set-top without setting up a VCR Commander module, or display when the subscriber is not authorized for the VCR Commander service. See page 13-5.	Order VCR Commander Barker	Enable this option to display the barker.	If you disable this feature, the barker is not displayed.

What Can You Configure for SARA?, Continued

Program Recording Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Show VCR Commander options on the General Settings menu. See page 13-6.	VCR Commander menu	Allow only specific set-tops to show the VCR Commander options on the General Settings menu. Choose Addressable .	Allow all set-tops to show the VCR Commander options on the General Settings menu. Choose Global .
Use the VCR Commander menu option to record programs. (The set-top must have a VCR Commander module.) See page 13-7.	VCR Commander	Enable this option if you want to allow subscribers to record programs with the VCR Commander service.	If you disable this feature, subscribers cannot record programs with the VCR Commander service.
Record a currently tuned program using the Record Now function of the VCR Commander service. See page 13-8.	Has Record	Enable this option to allow subscribers to record the currently tuned program from the Quick Settings menu.	If you disable this feature, subscribers cannot record the currently tuned program from the Quick Settings menu.
Record blocked channels without manually unblocking them. See page 13-9.	Record Blocked Channels	Enable this option if you want to allow subscribers to record blocked channels without manually unblocking them.	If you disable this feature, subscribers cannot record blocked channels without manually unblocking them.

What Can You Configure for SARA?, Continued

Remote Control Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Allow system operators to configure how the set-top responds when the A key is pressed on the remote control. For example, subscribers can press the A key to access a unique service. See page 14-2.	Configure How the Set-Top Responds to the A Key	We recommend that you launch services using either channel entry or a services portal rather than using the A key.	Create a _KEYA SAM service to determine which service the A key will launch.
Allow system operators to configure how the set-top responds when the B key is pressed on the remote control. For example, subscribers can press the B key to access a unique service. See page 14-2.	Configure How the Set-Top Responds to the B Key	We recommend that you launch services using either channel entry or a services portal rather than using the B key.	Create a _KEYB SAM service to determine which service the B key will launch.
Allow system operators to configure how the set-top responds when the GUIDE key is pressed on the remote control. For example, subscribers can press the GUIDE key to access a unique service. See page 14-2.	Configure How the Set-Top Responds to the GUIDE Key	We recommend that you launch services using either channel entry or a services portal rather than using the GUIDE key.	Create a _GUID SAM service to determine which service the GUIDE key will launch.

What Can You Configure for SARA?, Continued

Remote Control Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Allow system operators to configure how the set-top responds when the MENU key is pressed on the remote control. For example, subscribers can press the MENU key to access a unique service. See page 14-2.	Configure How the Set-Top Responds to the MENU Key	We recommend that you launch services using either channel entry or a services portal rather than using the MENU key.	Create a _MENU SAM service to determine which service the MENU key will launch. Important: Some remote controls use the same key for MENU and for SETTINGS. If your subscribers are using this type of remote control, do not create a _MENU SAM service. The SETTINGS key will always display the Quick Settings or General Settings menu.
Allow system operators to configure how the set-top responds when the POWER key is pressed on the remote control. For example, subscribers can press the POWER key to access a unique service. See page 14-2.	Configure How the Set-Top Responds to the POWER Key	We recommend that you launch services using either channel entry or a services portal rather than using the POWER key.	Create a _POWR SAM service to determine which service the POWER key will launch.
Allow system operators to configure how the set-top responds when the PPV key is pressed on the remote control. For example, subscribers can press the PPV key to access a unique service. See page 14-2.	Configure How the Set-Top Responds to the PPV Key	We recommend that you launch services using either channel entry or a services portal rather than using the PPV key.	Create a _PPVB SAM service to determine which service the PPV key will access.

What Can You Configure for SARA?, Continued

Service Authorization Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Disable set-tops that are not authorized for the Brick Mode Avoidance package. See page 15-2.	Allow Service Disconnect (Brick mode)	Enable this option to use a Brick Mode Avoidance package to authorize set-tops.	If you disable this feature, then you cannot use a Brick Mode Avoidance package to authorize set-tops.
Provide a telephone number for subscribers who tune to an unauthorized channel. See page 15-4.	Not Authorized Phone	Enable this option to display the Customer Service Number on a barker when subscribers tune to an unauthorized channel.	If you disable this feature, then the barker is displayed without a phone number.
Provide a telephone number for a set-top that is not authorized for services (in Brick mode). See page 15-5.	Disconnect Barker Phone	Enable this option to display a Customer Service Number on a barker when a set-top is in Brick mode.	If you disable this feature, then no phone number is displayed on the barker when a set-top is in Brick mode.
Automatically display the diagnostics screens when an unauthorized set-top is first powered on. See page 15-6.	Enable Auto Diagnostics	Enable this option to automatically display the diagnostics screens when an unauthorized set-top is first powered on.	If you disable this feature, then the diagnostic screens are not displayed when an unauthorized set-top is in first powered on.

Timer Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Set timers on the set-top. The timers include Remind New, Wake-Up, Sleep, Turn Off, and VCR New. See page 16-2.	Timer: All	Enable this option to allow subscribers to set timers on the set-top.	If you disable this feature, subscribers cannot set timers on the set-top.
Use the numeric keys on the remote to enter time values on screens in SARA. See page 16-3.	Numeric Key Sets Times	Enable this option to allow subscribers to use the numeric keys on the remote control to enter time values on screens in SARA.	If you disable this feature, subscribers must use the Arrow keys on the remote to scroll through the numbers on the screen to enter time values.

What Can You Configure for SARA?, Continued

Timer Options, Continued			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Enable the Sleep Timer from the Quick Settings menu. See page 16-4.	Has Sleep Timer	Enable this option to allow subscribers to activate the Sleep Timer from the Quick Settings menu.	If you disable this feature, subscribers cannot activate the Sleep Timer from the Quick Settings menu.
Specify how long (in minutes) before an event begins that a message appears to remind subscribers that an event they have purchased is about to begin. See page 16-5.	PPV Reminder Time	Set the PPV Reminder time to 5 minutes.	Set the PPV Reminder time to 10 minutes.

Virtual Channel Options			
What Do You Want To Do?	Option Name	Recommended Setting	Alternate Setting
Display a text-only channel (virtual channel) that includes information such as announcements of civic organizations, community organizations, or local businesses. For more information on virtual channels, see the <i>SARA Application Server 3.4 User's Guide</i> , part number 4012159.	Virtual Channel	N/A	N/A

Where Are the Options on the SARA Application Server?

Introduction

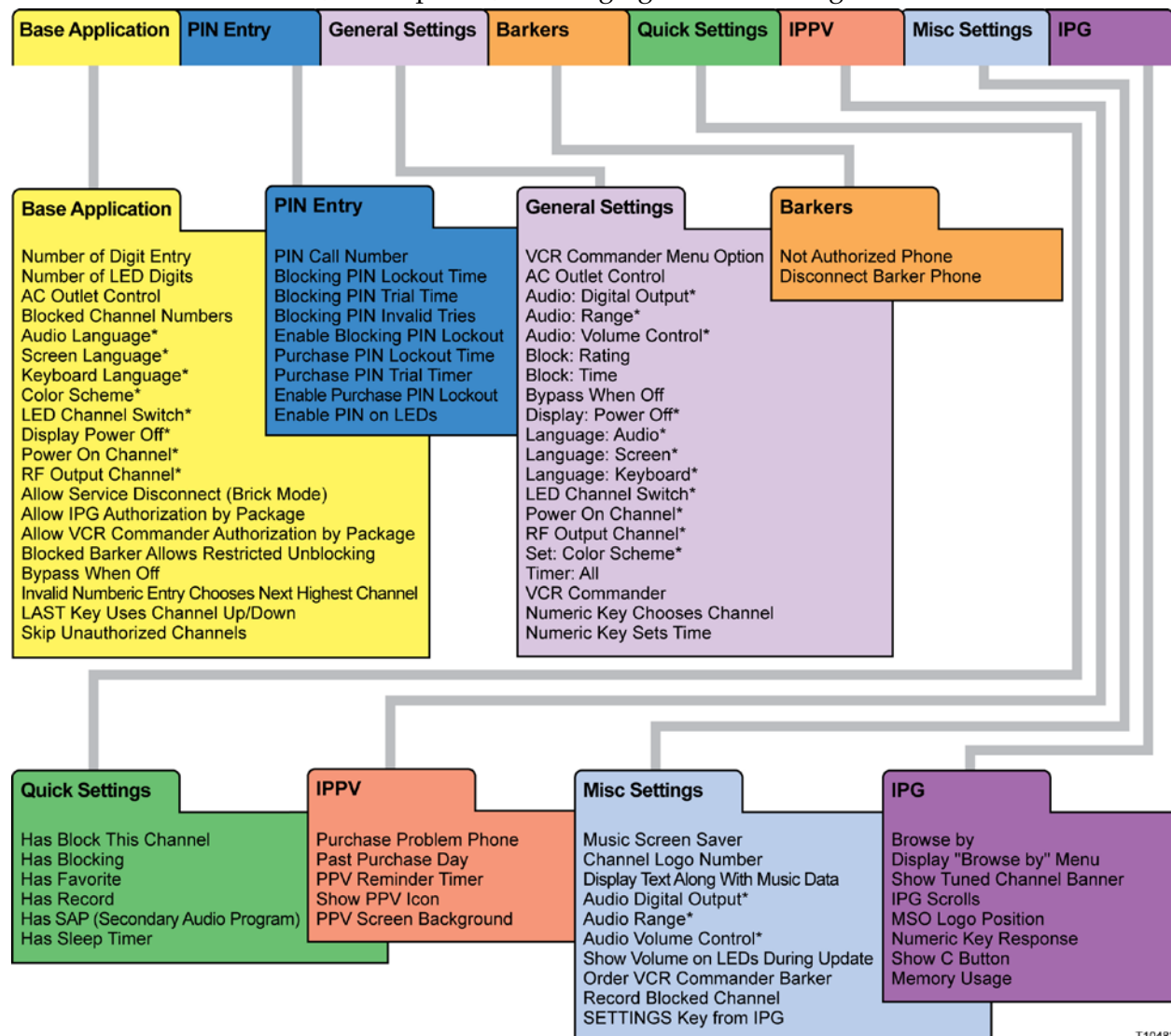
To send a configuration to a set-top, you must navigate through several tabs on the SARA Application Server. To help you quickly find each configurable option, this section provides a listing of what options are under each tab.

What Options Are Under Each Tab?

Keep the following diagram handy to help you find where each configurable option is on the SARA Application Server.

Notes:

- Items marked with an asterisk have dependencies on another setting.
- The options listed here represent a Global Configuration. The options differ for an Addressable, Hub-Specific, and Staging Defaults configuration.



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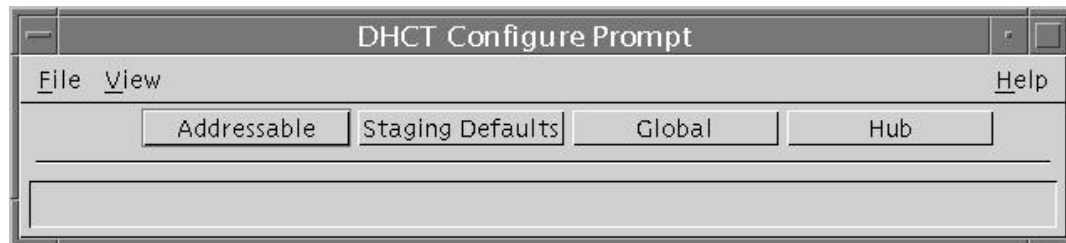
Choose a Method for Sending a Configuration to Set-Tops

Introduction

Now that you are familiar with the different configurable options for SARA and where the options are located, the next step is to decide what method to use to send the configuration to the set-top.

Four Methods for Sending the DHCT Configuration

The DHCT Configuration allows you to set the options for SARA that affect the subscriber's experience. When you choose the **DHCT Config** option on the SARA Application Server, the following window opens.



From this window, you determine the method of configuration you want to use. You can send a configuration with any of the following methods:

- For a single set-top, identified by MAC address (*addressable configuration*)
- For all set-tops in the network (*global configuration*)
- For all set-tops in a specific hub (*hub configuration*)
- During the staging process, so that all set-tops receive this configuration when they are staged (*staging defaults*)

The method you use may depend on where you are in the rollout of your set-tops to your subscribers:

- If you are deploying new set-tops for a large subscriber base, you can set the DHCT configuration during staging.
- If you already have an established subscriber base and you want to change a configuration for all your subscribers, you can use a global configuration.
- If you want to send a configuration that is specific to a hub, you can use a hub configuration.
- If necessary, you can also change or set the configuration options for a single set-top without reconfiguring all of the set-tops in your network.

Choose a Method for Sending a Configuration to Set-Tops, Continued

Depending upon which method you choose, different options are available for configuring SARA. For example, if you choose to send a global configuration, you can specify what options are available to the subscriber on the Quick Settings menu of the set-top. If you send an addressable configuration or set the staging defaults, you cannot configure the options for the Quick Settings menu with either of these methods.

When Updates Are Sent to the Set-Top

After you save each option, the SARA Application Server automatically sends the new settings to the set-top.

Important Notes About the Addressable Configuration

The addressable configuration information is not stored on the SARA Application Server. The set-top must be plugged in and functional to receive the addressable configuration message.

In System Release (SR) 1.5.1 and earlier, when you sent a configuration to a single set-top, the DNCS would replace *all* of the settings in the set-top with the current settings in the configuration (including PINs and parental blocking settings). Beginning with SR 2.1, the DNCS sends only the configuration options that you change. The field names for any options that you change will be highlighted in bold in the Set Up Addressable DHCT Configuration window.

Coordinate With the Billing System

You can send some operating parameters (such as PIN numbers) to the set-top through a set-top configuration or through the billing system. To avoid sending conflicting instructions to the set-tops, be sure to coordinate with your billing system on how you want to set up the operating parameters.

DHCT Config Screen Behavior

Unlike most other screens in the DBDS, the DHCT Config screens behave slightly different. When you make a change to a field on a DHCT Configuration screen, fields on *other* screens may be affected. For example, if you enable Audio Range on the General Settings tab, the Misc Settings tab does not have a field for selecting the Audio Range. Conversely, if you disable Audio Range on the General Settings tab, then the Misc Settings tab has a field for setting the audio range.

Send a Global Configuration to All Set-Tops in Your Network

Introduction

A Global Configuration lets you configure the options for all the set-tops in your network. This section explains how to send a global configuration to all set-tops in your network.

For detailed information about each option, refer to the chapter in this guide that corresponds to the functional area for that option.

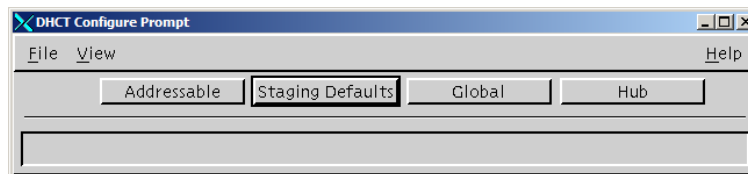
Sending a Global Configuration

Follow these steps to send a global configuration to all the set-tops in your network.

Important: The parameters that you set in the Set Up Global DHCT Configuration window affect the parameters that are available in the Addressable, Hub, and Staging Defaults windows. For this reason, we present the Global Configuration items first in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.



Send a Global Configuration to All Set-Tops in Your Network, Continued

3. Select **Global**.

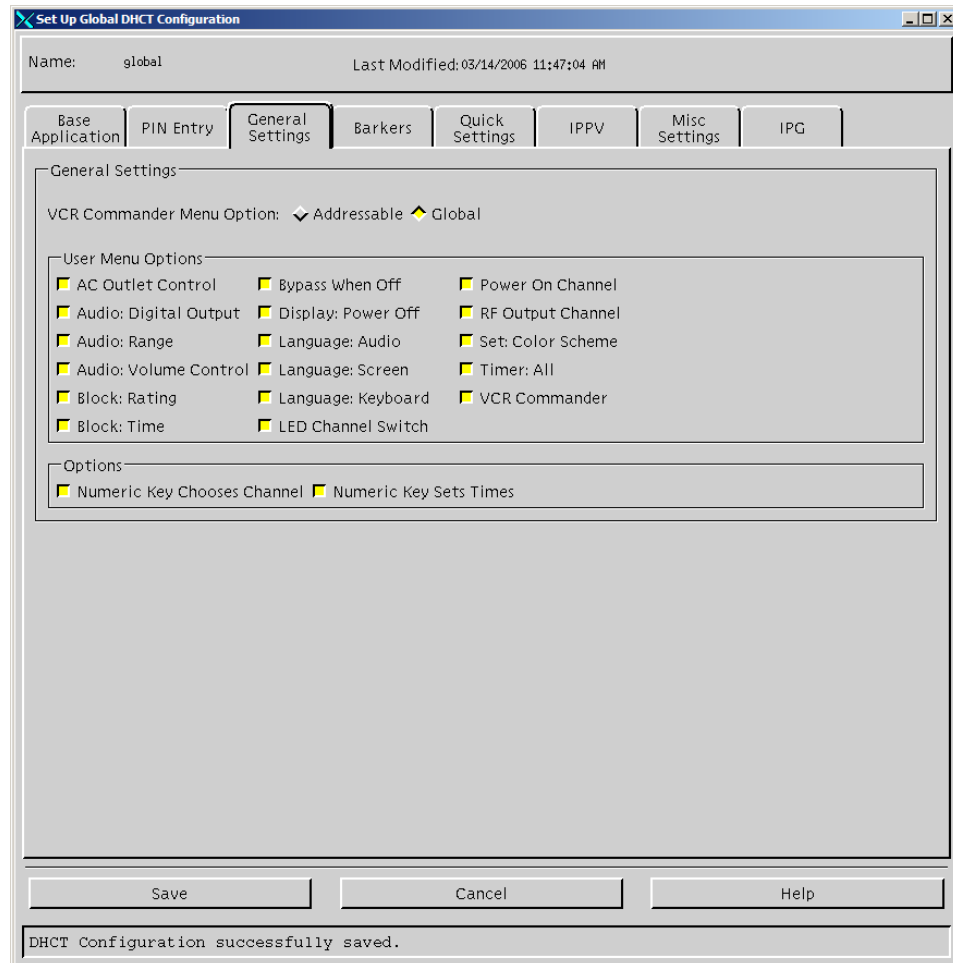
Result: The Set Up Global DHCT Configuration window opens.

The screenshot shows the 'Set Up Global DHCT Configuration' window. At the top, it displays 'Name: global' and 'Last Modified: 03/06/2006 02:21:57 PM'. Below this is a tabbed interface with tabs for 'Base Application', 'PIN Entry', 'General Settings', 'Barkers', 'Quick Settings', 'IPPV', 'Misc Settings', and 'IPG'. The 'Base Application' tab is selected. Inside this tab, there are several settings: 'Number of Digit Entry' is set to 4, 'Number of LED Digits' is set to 8, 'LED Channel Switch' has three radio buttons with 'Channel When Tuning' selected, and 'RF Output Channel' is set to 3 and 4. There are three checkboxes for authorization: 'Allow Service Disconnect (Brick Mode)', 'Allow IPG Authorization by Package', and 'Allow VCR Commander Authorization by Package', each followed by a 'Package Name' field set to '- none -'. An 'Options' section contains four checkboxes: 'Blocked Barker Allows Restricted Unblocking', 'LAST Key Uses Channel Up/Down', 'Invalid Numeric Entry Chooses Next Highest Channel', and 'Skip Unauthorized Channels'. At the bottom of the window are 'Save', 'Cancel', and 'Help' buttons.

Send a Global Configuration to All Set-Tops in Your Network, Continued

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.



Send a Global Configuration to All Set-Tops in Your Network, Continued

5. On the General Settings tab, do the following:
 - a) In the General Settings area, select a VCR Commander Menu Option:
 - **Addressable** - To allow only specific set-tops to show or hide the General Settings VCR Commander menu items
 - **Global** - To show or hide the General Settings VCR Commander menu items for all set-tops
 - b) In the User Menu Options section, select the desired options you want to enable or disable for subscribers.
 - c) In the Options section, select both of the following options:
 - **Numeric Key Chooses Channel** – To allow subscribers to use numeric entry on the remote control when entering channels in the IPG and General Settings
 - **Numeric Key Sets Times** – To allow subscribers to use numeric entry on the remote control when setting times in General Settings
 - d) Click **Save**.
6. Select the other configuration tabs and enter the necessary information in the appropriate fields.
7. Click **Save** when finished.

Result: The SARA Application Server sends the configuration to all set-tops.

Set Staging Defaults

Introduction

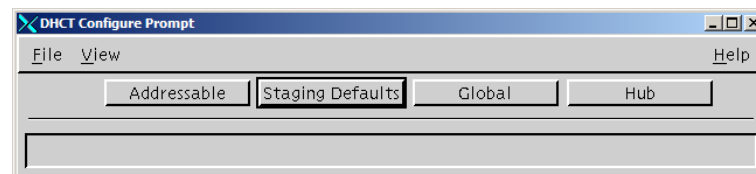
Before you deploy set-tops to subscribers' homes, you must load the necessary software and security information into those set-tops. This process is known as *staging* the set-top. During this process, you can also set many default configuration values for each set-top. This section describes how to set up those default configuration values.

Setting Up Staging Defaults

Follow these steps to set up default values for staging set-tops.

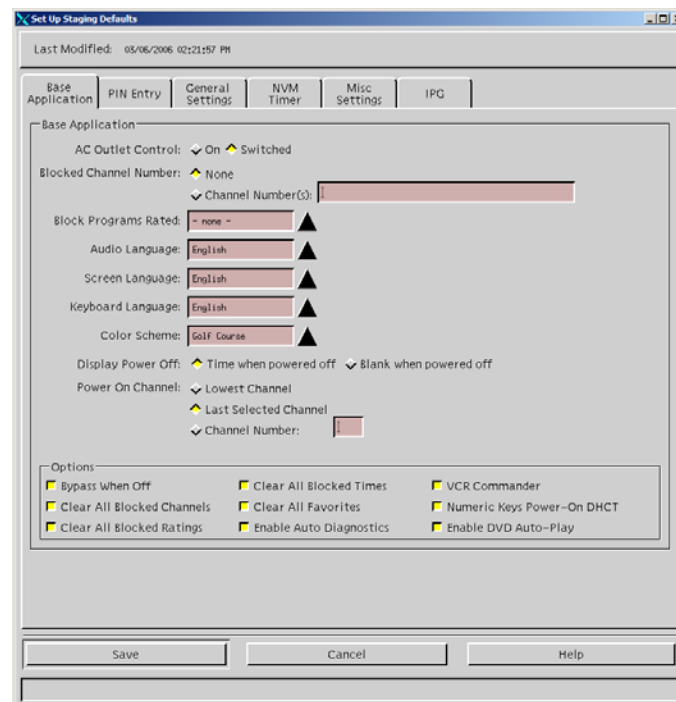
1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.



3. Select **Staging Defaults**.

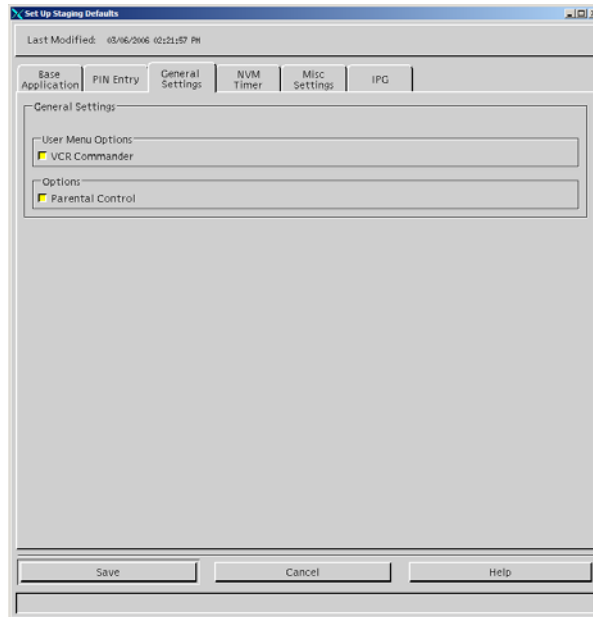
Result: The Set Up Staging Defaults window opens.



Set Staging Defaults, Continued

4. Select the **General Settings** tab.

Result: The General Settings tab moves to the forefront.



5. On the General Settings tab, select one or both of the following options:
 - **VCR Commander** - To allow the user to enable the VCR Commander preference to display in the set-top General Settings
 - **Parental Control** - Select this option to enable Parental Control. If disabled, the staged set-tops will not have Parental Control capability
6. Select the other configuration tabs and enter the necessary information in the appropriate fields.
7. Click **Save** when finished.

Build and Send a Configuration to All Set-Tops in a Single Hub

Introduction

After you have built a global configuration for all of the set-tops in your network, you may determine that some of the options need to vary by hub. A hub configuration lets you set the configuration options specific to a hub. For example, a hub configuration will allow you to select the output channel by hub. As another example, a hub configuration will allow you to have different phone numbers for the various barker messages displayed by the set-top.

Sending a configuration to all set-tops in a hub requires several steps. First you must select the options that you want to configure by hub. The next step is to build a hub-specific configuration, and then send the configuration to all the set-tops in the hub.

This section provides procedures for selecting the options that you want to configure by hub and for sending the configuration by hub. This section also covers modifying a hub configuration and deleting a hub configuration. For detailed information about each option, refer to the chapter in this guide that corresponds to the functional area for that option.

Build and Send a Configuration to All Set-Tops in a Single Hub, Continued

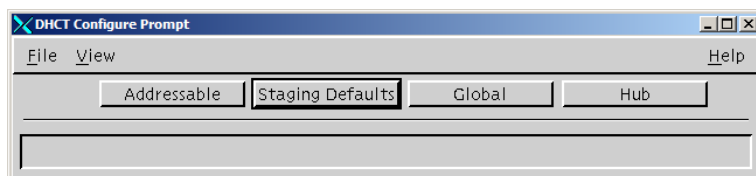
Selecting the Options That You Want to Configure by Hub

Before you can send a configuration to all set-tops in a hub, you must first specify the options that you can set on a hub-specific basis. The only options that you can set by hub are the ones that you specify in this procedure.

Complete the following steps to select the options that you want to configure by hub.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

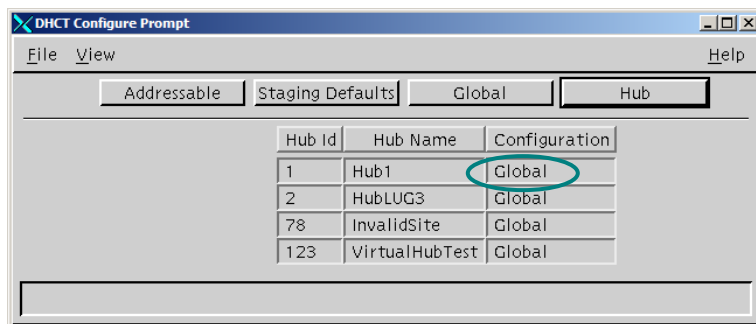
Result: The DHCT Configure Prompt window opens.



3. Click **Hub**.

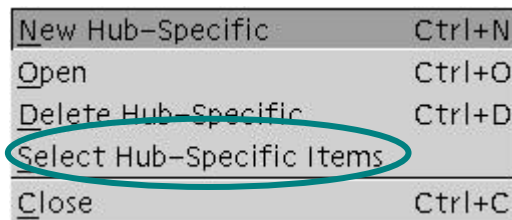
Result: The DHCT Configure Prompt window displays a list of hubs in your network.

Note: Under the Configuration column, the window specifies whether the hub is using a Global or Hub-Specific configuration. If this is your first time configuring the options for a hub, it will display Global for all hubs.

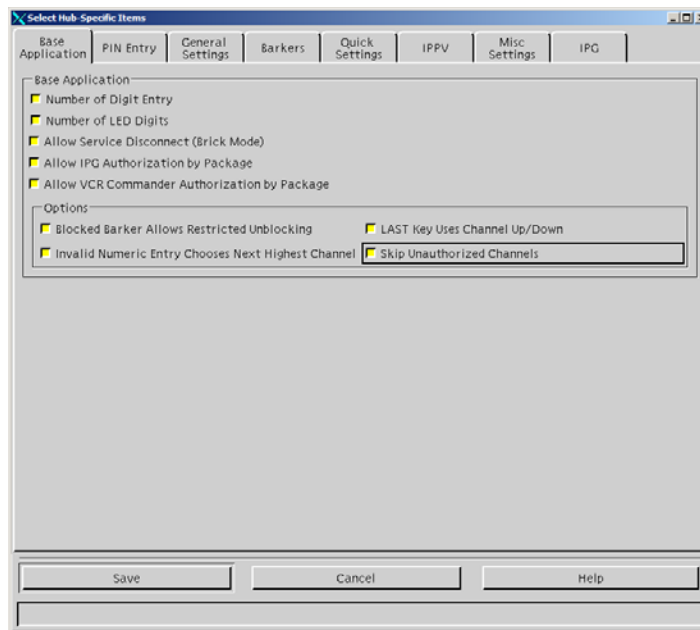


Build and Send a Configuration to All Set-Tops in a Single Hub, Continued

- From the **File** menu, choose **Select Hub-Specific Items**.



Result: The Select Hub-Specific Items window opens with the Base Application tab in the forefront.



- Select the options on the Base Application tab that you want to configure by hub.
- Select the other configuration tabs and choose the options that you want to configure by hub.
- Click **Save** when finished.

Result: The options that you have selected on these tabs are now available for you to configure by hub. Go to **Building and Sending a Configuration to All Set-Tops in a Hub**, next in this section.

Build and Send a Configuration to All Set-Tops in a Single Hub, Continued

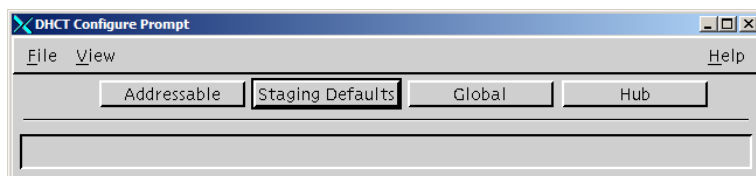
Building and Sending a Configuration to All Set-Tops in a Hub

After you select the options that you want to configure by hub, the next step is to build the hub-specific configuration and then send the configuration to all set-tops in a hub.

Complete the following steps to send a configuration to all set-tops in a hub.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

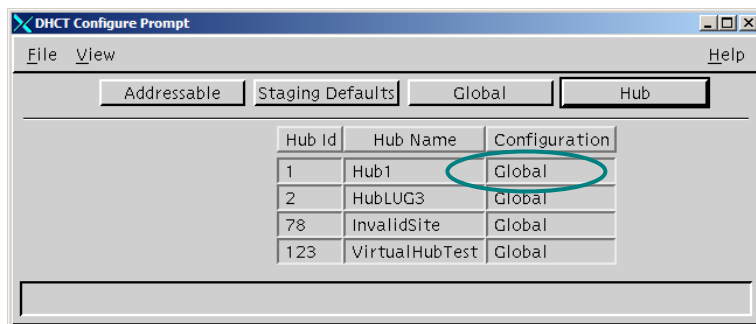
Result: The DHCT Configure Prompt window opens.



3. Click **Hub**.

Result: The DHCT Configure Prompt window displays a list of hubs in your network.

Note: Under the Configuration column, the window specifies whether the hub is using a Global or Hub-Specific configuration. If this is your first time configuring the options for a hub, it will display Global for all hubs.



4. Single-click the hub that you want to have a unique configuration.

Important: Double-clicking on a hub that is specified for a global configuration causes a message to appear that warns you that you are about to change the global configuration for this hub.

Build and Send a Configuration to All Set-Tops in a Single Hub, Continued

- From the **File** menu, select **New Hub-Specific**.

Result: The Set Up Hub DHCT Configuration window for the selected hub opens with the Base Application tab in the forefront.

The screenshot shows the 'Set Up Hub DHCT Configuration' window for 'Hub1'. The 'Base Application' tab is selected. The window contains various configuration options for the base application, including:

- Number of Digit Entry: 8
- Number of LED Digits: 8
- AC Outlet Control: On (Selected), Switched
- Audio Language: English
- Screen Language: English
- Keyboard Language: English
- Color Scheme: Boardwalk
- LED Channel Switch: Always Time (Selected), Always Channel, Channel When Tuning
- Display Power Off: Time when powered off (Selected), Blank when powered off
- Power On Channel: Lowest Channel (Selected), Last Selected Channel
- Channel Number: 3
- RF Output Channel: 3 (Selected), 4
- Allow Service Disconnect (Brick Mode): Package Name: NONE
- Allow IPG Authorization by Package: Package Name: NONE
- Allow VCR Commander Authorization by Package: Package Name: NONE
- Options section:
 - Blocked Barker Allows Restricted Unlocking (Selected)
 - LAST Key Uses Channel Up/Down (Selected)
 - Bypass When Off (Selected)
 - Skip Unauthorized Channels (Selected)
 - Invalid Numeric Entry Chooses Next Highest Channel (Selected)

At the bottom of the window are buttons for 'Save', 'Cancel', and 'Help'.

- Set the options that are available on the Base Application tab.

Note: Based on the configuration that you chose under **Selecting the Options That You Want to Configure by Hub**, some of the options are available for changing, and others are dimmed and cannot be changed.

Build and Send a Configuration to All Set-Tops in a Single Hub, Continued

7. Select the other configuration tabs and set the options as desired.
8. Click **Save** when finished.

Result: The SARA Application Server sends the configuration to all the set-tops in the hub that you specified. Changes should be available on the set-top in a few minutes.

Note: After you send a hub-specific configuration, any changes that you make to the global configuration do not affect the hub-specific settings. If you need to change an option that affects all of the set-tops in your network, you will need to make this change in the global configuration and in the hub-specific configurations for any hubs that require this change.

For example, if you configure the barker phone number to be set by hub and the phone numbers for service change, you will need to update the phone number in more than one place. You will need to update the phone number in the global configuration for the set-tops on hubs that do not use a hub-specific configuration, and you will need to update the phone number for every hub-specific configuration that requires this change.

9. To verify that the set-top receives the changes, periodically check the set-top for one of the more obvious changes among the settings you configured specifically for that hub. The change should be accepted by the set-top within a minute or two after being saved.

Build and Send a Configuration to All Set-Tops in a Single Hub, Continued

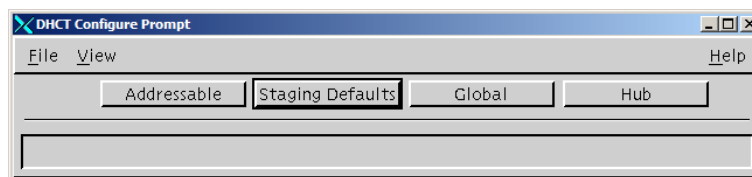
Modifying a Hub Configuration

As the demands of your system change, you may need to change some of the settings for this hub.

Complete the following steps to modify a hub configuration.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

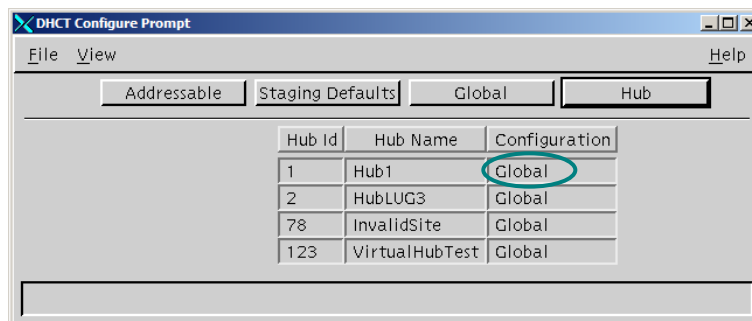
Result: The DHCT Configure Prompt window opens.



3. Click **Hub**.

Result: The DHCT Configure Prompt window displays a list of hubs in your network.

Note: Under the Configuration column, the window specifies whether the hub is using a Global or Hub-Specific configuration. If this is your first time configuring the options for a hub, it will display Global for all hubs.

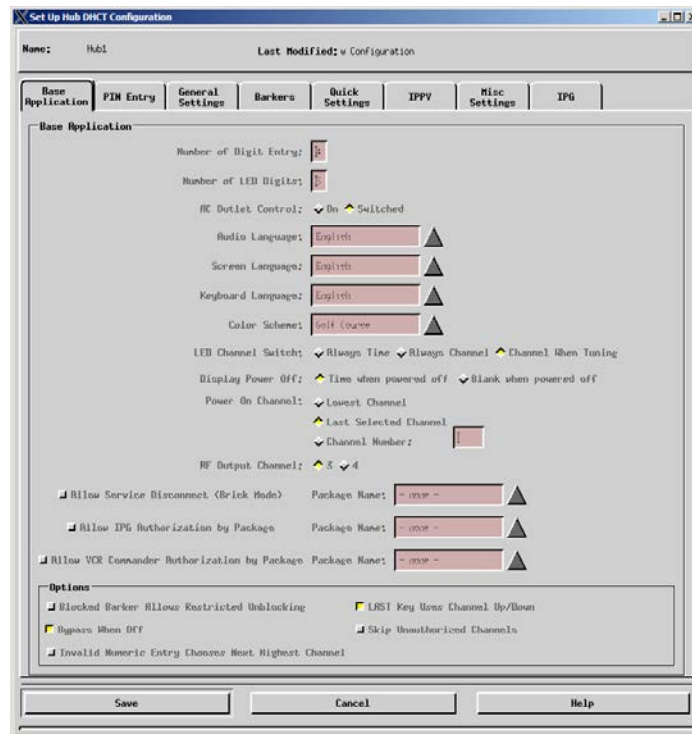


4. Single-click the hub for which you want to modify the configuration.

Build and Send a Configuration to All Set-Tops in a Single Hub, Continued

- From the **File** menu, select **Open**.

Result: The Set Up Hub DHCT Configuration window for the selected hub opens with the Base Application tab in the forefront.



- Modify the options that are available on this tab.

Note: Based on the configuration that you chose under **Selecting the Options That You Want to Configure by Hub**, some of the options are available for changing, and others are dimmed and cannot be changed.

- Select the other configuration tabs and modify the options.
- Click **Save** when finished.

Result: The SARA Application Server sends the configuration to all the set-tops in the hub that you specified. Changes should be available on the set-top in a few minutes.

- To verify that the set-top receives the changes, periodically check the set-top for one of the more obvious changes among the settings you configured specifically for that hub. The change should be accepted by the set-top within a minute or two after being saved.

Build and Send a Configuration to All Set-Tops in a Single Hub, Continued

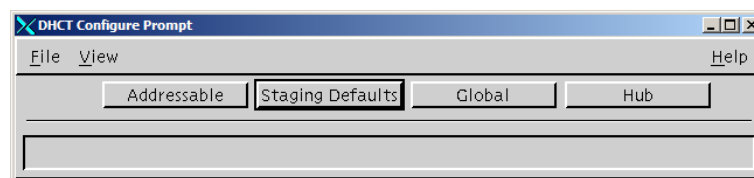
Deleting a Hub-Specific Configuration

As the demands of your system change, you may need to change a hub-specific configuration back to using a global configuration. To do that, you must delete the hub-specific configuration for that hub.

Complete the following steps to delete a hub-specific configuration.

1. On the DNCS Administrative Console, select the **Server Applications Tab**.
2. Click **DHCT Config**.

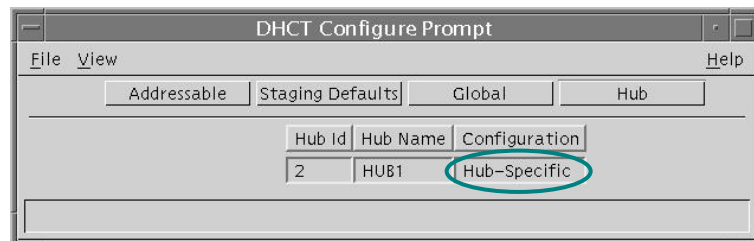
Result: The DHCT Configure Prompt window opens.



3. Click **Hub**.

Result: The DHCT Configure Prompt window displays a list of hubs in your network.

Note: Under the Configuration column, the window specifies whether the hub is using a Global or Hub-Specific configuration.



4. Highlight the hub where you want to delete the hub-specific configuration.
5. Click **File** and select **Delete Hub-Specific**.

Result: The system prompts you whether you want to delete the hub-specific configuration.

6. Click **Yes**.

Result: The SARA Application Server deletes the hub-specific configuration. The set-top on the affected hub should revert to the global configuration within a minute or two.

Send a Configuration to a Single Set-Top

Introduction

An addressable configuration changes or sets the configuration options for a single set-top without reconfiguring all of the set-tops in your network. This section explains how to send an addressable configuration to a single set-top.

For detailed information about each option, refer to the chapter in the guide that corresponds to the functional area for that option.

Important Notes About the Addressable Configuration

The addressable configuration information is not stored on the SARA Application Server. The set-top must be plugged in and functional to receive the addressable configuration message.

In SR 1.5.1 and earlier, when you sent a configuration to a single set-top, the SARA Application Server would replace *all* of the settings in the set-top with the current settings in the configuration (including PINs and parental blocking settings). Beginning with SR 2.1, the SARA Application Server only sends the configuration options that you change. The field names for any options that you change will be highlighted in bold in the Set Up Addressable DHCT Configuration window.

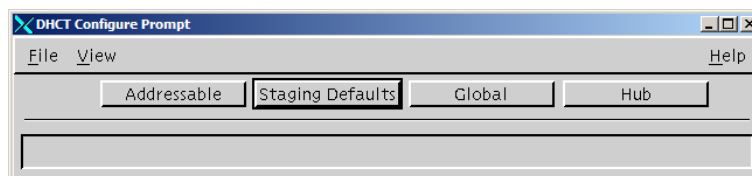
If you want to change some of the configurable parameters for an individual set-top, send an addressable configuration using the procedure that follows. If you want to reset all of the settings, see **Reset User Settings**, next in this chapter.

Sending an Addressable Configuration

Follow these steps to send an addressable configuration to a single set-top.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.



Send a Configuration to a Single Set-Top, Continued

3. Click **Addressable**.

Result: The Set Up Addressable DHCT Configuration window opens with the Base Application tab in the forefront.

The screenshot shows the 'Set Up Addressable DHCT Configuration' window with the 'Base Application' tab selected. The window has a title bar and a menu bar with options: Base Application, PIN Entry, General Settings, NVM Timer, Misc Settings, and IPC. The 'Base Application' tab is active, showing various settings. At the top, there is a field for 'DHCT MAC Address' with a value of '1 : 1 : 1 : 1 : 1 : 1' and a 'Last Modified' timestamp of '03/06/2006 02:21:57 PM'. Below this, the 'Base Application' section contains several settings: 'AC Outlet Control' set to 'On' (with a 'Switched' option), 'Blocked Channel Number' set to 'None' (with a 'Channel Number()' field), 'Block Programs Rated' set to '- none -', 'Audio Language' set to 'English', 'Screen Language' set to 'English', 'Keyboard Language' set to 'English', and 'Color Scheme' set to 'Golf Course'. There are also 'Display Power Off' options (Time when powered off, Blank when powered off) and 'Power On Channel' options (Lowest Channel, Last Selected Channel, Channel Number). At the bottom, there is an 'Options' section with several checkboxes: 'Bypass When Off', 'Clear All Blocked Times', 'VCR Commander', 'Clear All Blocked Channels', 'Clear All Favorites', 'Numeric Keys Power-On DHCT', 'Clear All Blocked Ratings', 'Enable Auto Diagnostics', and 'Enable DVD Auto-Play'. At the very bottom of the window are buttons for 'Send', 'Undo Changes', 'Reset User Settings', 'Cancel', and 'Help'.

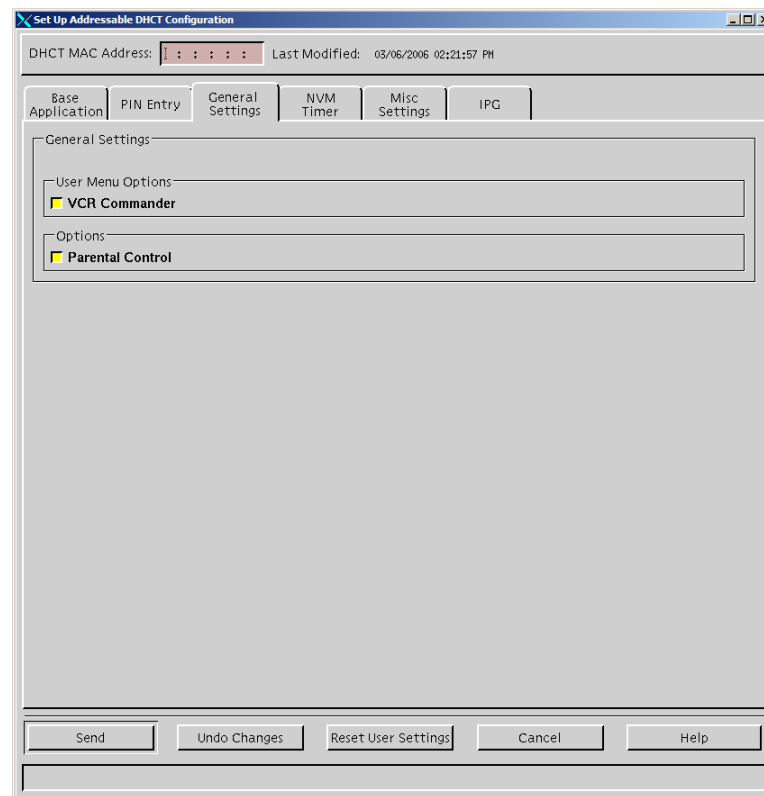
4. Type the MAC address in the DHCT MAC Address field.

Note: You must provide the MAC address when configuring a single set-top.

Send a Configuration to a Single Set-Top, Continued

5. Select the **General Settings** tab.

Result: The General Settings tab moves to the forefront.



6. On the General Settings tab, select one or both of the following options:
 - **VCR Commander** - To allow the user to enable the VCR Commander preference to display in the set-top General Settings menu
 - **Parental Control** - To enable Parental Control. If this feature is disabled, subscribers will not be able to block programs from the set-top General Settings menu
7. Select the other configuration tabs and enter the necessary information in the appropriate fields.
8. Click **Save** when finished.

Result: The SARA Application Server sends the configuration to the set-top that you specified.

Reset User Settings

Introduction

Occasionally, it is easier to simply reset all the settings on the set-top to the staging defaults rather than changing individual settings. The Reset User Settings feature accomplishes this task. In addition to resetting PINs, color scheme selections, and other configuration settings, all favorite channel selections and parental control settings will also be reset.



CAUTION:

The Reset User Settings feature will erase all stored recordings on DVR-equipped set-tops.

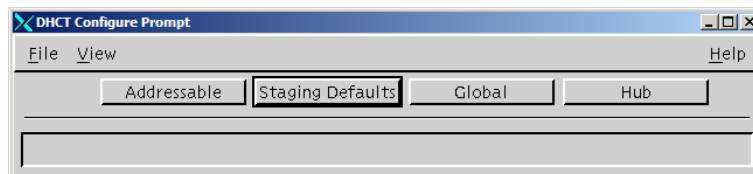
This section provides the procedure for resetting user settings.

Resetting User Settings

To reset user settings, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

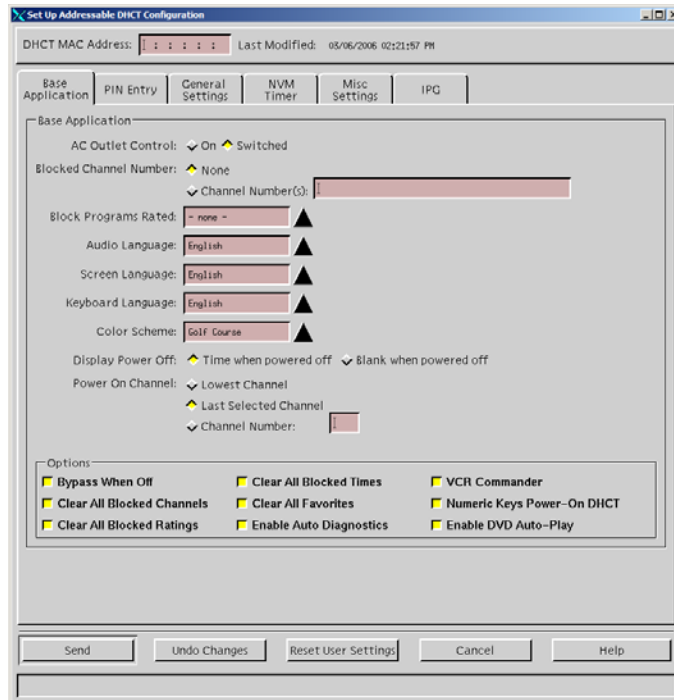
Result: The DHCT Configure Prompt window opens.



Reset User Settings, Continued

3. Click **Addressable**.

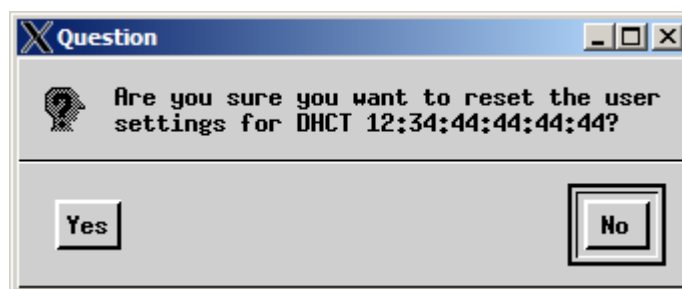
Result: The Set Up Addressable DHCT Configuration window opens with the Base Application tab in the forefront.



4. In the DHCT MAC Address field, enter the MAC address for the set-top that you want to reset the user settings.

5. Click **Reset User Settings**.

Result: The system displays a prompt asking if you are sure that you want to reset the user settings.



CAUTION:

DVR recordings will be erased.

6. Click **Yes** to reset the settings.

Configure SARA for Your Subscribers

Introduction

Now that you know the possibilities for SARA and the different methods for configuring the options, the next step is to decide how you want to configure SARA for your subscribers. Start by asking yourself some questions. How many packages do you offer subscribers? What kind of customer support effort are you willing to commit? For example, if you arrange all of your HBO channels in the 900 range, do you want your subscribers who are not authorized for HBO to scroll through all these channels? If not, you may want to enable the **Skip Unauthorized Channels** option to prevent the subscriber from having to stop on every unauthorized channel. But, if you interlace premium channels, such as Showtime and HBO, with channels that all subscribers can view, you may want to disable the **Skip Unauthorized Channels** option. In this scenario, when the subscriber tunes to an unauthorized channel, the “unauthorized service” text appears on the screen. This configuration allows you to advertise your premium channels.

Configuring the Options for SARA to Affect the Subscriber Experience

Chapters 2 through 16 provide step-by-step instructions for configuring the options for SARA to enhance your subscribers’ experience. The options are grouped alphabetically by functional area. We also provide troubleshooting information for each option so that your customer support representative (CSRs) can be prepared for any support calls that are generated.

Important:

- The procedures in the following chapters cover a global configuration. When you send a global configuration, *all* set-tops in your system are affected.
- If you want to send a configuration to all the set-tops in a hub, see **Build and Send a Configuration to All Set-Tops in a Single Hub**, earlier in this chapter.
- If you want to change a setting for only one set-top, see **Send a Configuration to a Single Set-Top**, earlier in this chapter.
- If you want to set the Staging Defaults, see **Set Staging Defaults**, earlier in this chapter.

Chapter 2

Audio Options

Overview

Introduction

Subscribers demand crisp clear audio. This chapter provides the options that you can configure through SARA to provide the best audio for your subscribers.

What Audio Options Can You Configure?

You can configure the following audio options for SARA:

- Select a preferred audio language for digital services
- Send either a Dolby Digital or uncompressed signal to the digital output on the set-top
- Select the best audio range for TV viewing or connection to theater systems
- Allow subscribers to adjust the volume from either the set-top or TV
- Allow subscribers to select a different audio for any digital program that provides additional audio
- Select the language that the wireless keyboard uses to communicate with the set-top
- Show the volume level on the LED when adjusting the volume on the set-top

In This Chapter

This chapter contains the following topics.

Topic	See Page
Select a Preferred Audio Language for Digital Services	2-2
Select the Digital Output on the Set-Top	2-5
Select the Best Audio Range for TV Viewing or Connection to Theater Systems	2-8
Adjust the Volume from Either the Set-Top or the TV	2-11
Allow Subscribers to Select the Audio Source for Any Program That Provides an Alternate Audio Track	2-15
Disable Audio and Video Synchronization	2-17
Select the Language for the Wireless Keyboard	2-19
Show Volume Level on LED When Adjusting Volume from the Set-Top	2-22

Select a Preferred Audio Language for Digital Services

Introduction

The Audio Language option allows subscribers to choose a preferred audio language for digital services. If subscribers use the Language: Audio option on the General Settings menu to select a preferred audio language and they tune to a digital service that supports this language, then the service is broadcast in this language. If the service does not support the preferred language, then the primary audio stream will be output. If this feature is disabled, subscribers must choose the language setting from the Quick Settings menu. The behavior of the language chosen on Quick Settings differs depending upon the type of set-top the subscriber is using:

- For DVR set-tops in this configuration, choosing the language from the Quick Settings menu makes the language stay active if you press the LAST key on the remote control or swap the PIP screen. Changing channels causes the language to revert to the primary audio stream.
- For non-DVR set-tops in this configuration, choosing the language from the Quick Settings menu is only temporary. A channel change causes the language to revert to the primary audio stream.

Language Choices

The following languages are supported:

- English
- French
- Spanish

Recommended Setting

Enable this option to allow subscribers to select a preferred audio language for digital services.

Allowing Your Subscribers to Select a Preferred Language for Digital Services

To force all of your subscribers to use the same language for digital services, see **Selecting the Audio Language for Your Subscribers**, next in this section.

If you want to allow your subscribers to select a preferred language for digital services, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.

Select a Preferred Audio Language for Digital Services, Continued

5. Make sure the option for **Language: Audio** is selected.
Result: When this field is selected, subscribers can change the audio language from the General Settings menu on the set-top.
6. Click **Save**.
Result: The language options now appear in the General Settings menu. Subscribers can use these options to select the preferred language.
7. Click **Cancel**.
Result: The DHCT Configure Prompt window appears.
8. Click **Staging Defaults**.
Result: The Set Up Staging Defaults window appears.
9. Click the **Base Application** tab.
10. For the **Audio Language** option, select the language that you want all your subscribers to use.
11. Click **Save**.
Result: All of your subscribers' set-tops will now use the audio language that you selected. Subscribers can use the General Settings Menu to change the audio language.
12. Click **Cancel**.
Result: The DHCT Configure prompt opens.
13. Click **File** and **Close** to close the DHCT Configure prompt.

Select a Preferred Audio Language for Digital Services, Continued

Selecting the Audio Language for Your Subscribers

If you want your subscribers to select the audio language for digital services, see **Allowing Your Subscribers to Select a Preferred Language for Digital Services**, earlier in this section.

To select the preferred audio language for all of your subscribers, complete the following steps. Following this procedure will cause all of your subscribers' set-tops to default to the same audio language for digital services. However, subscribers can still use the Quick Settings menu to switch to an alternate language if it is available for the service.

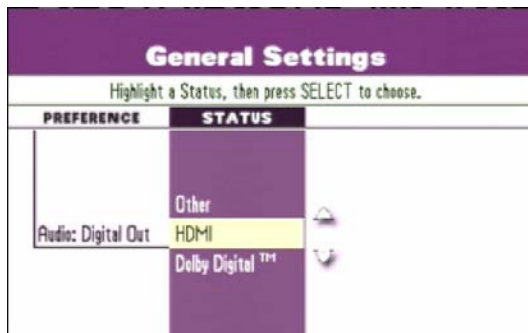
1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.
5. Make sure the option for **Language: Audio** is *not* selected.
Result: When this field is *not* selected, subscribers cannot change the audio language. Instead, you must select the language for the subscriber.
6. Select the **Base Application** tab to select the audio language for all subscribers.
Result: The Base Application tab appears in the forefront.
7. For the **Audio Language** option, select the language that you want all your subscribers to use.
8. Click **Save**.
Result: All of your subscribers' set-tops will now use the language you selected.
9. Click **Cancel**.
Result: The DHCT Configure prompt opens.
10. Click **File** and **Close** to close the DHCT Configure prompt.

Select the Digital Output on the Set-Top

Introduction

The Audio Digital Output option allows subscribers to control the type of digital output the set-top produces (Dolby Digital or an uncompressed signal). If you do not enable this option, then you must select the type of digital output that the set-top produces for all of your subscribers.

The following illustration shows the current setting and the available options that appear on the set-top for Audio: Digital Out.



Recommended Setting

We give you a choice to force the digital output to behave a certain way for the set-top or to allow the subscribers to configure the digital output. Because of the differences in audio equipment and the added complexity of HDMI devices, we recommend that you *always* make **Audio: Digital Out** available to subscribers on the General Settings menu and that you select **Dolby Digital** as the default.

Allowing Your Subscribers to Select Their Digital Output on the Set-Top

To allow your subscribers to select their digital output on the set-top, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.

Select the Digital Output on the Set-Top, Continued

5. Make sure that the option for **Audio: Digital Out** is selected.

Note: We recommend that you *always* make **Audio: Digital Out** available to subscribers on the General Settings menu.

6. Click **Save**.
7. Click **Cancel**.

Result: The Set Up Global DHCT Configuration window closes, and the DHCT Configure prompt appears.

8. Click **Staging Defaults**.

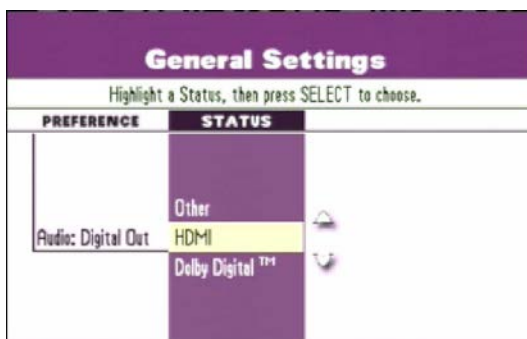
Result: The Set Up Staging Defaults window opens.

9. Click the **Misc Settings** tab.
10. In the area for **Volume** for **Audio: Digital Out**, select **Dolby Digital**.

Important: Do *not* choose Two Channel Only.

11. Click **Save**.

Result: All of your subscribers' set-tops will now use the digital audio output that you selected. The option for digital output appears in the General Settings menu. For set-top models equipped with HDMI output, when an HDMI display is connected, an additional "HDMI" choice is activated on the General Settings menu for Audio:Digital Out.



12. Click **Cancel**.

Result: The DHCT Configure prompt opens.

13. Click **File** and **Close** to close the DHCT Configure prompt.

Select the Digital Output on the Set-Top, Continued

Set-Tops with an HDMI Output

For set-top models equipped with a High-Definition Multimedia Interface (HDMI) output, when an HDMI display is connected, an additional “HDMI” choice is activated on the General Settings menu for Audio:Digital Out. Upon connection, the HDMI display informs the set-top of the digital audio formats that it can decode (for example, Dolby Digital versus PCM). Selecting “HDMI” (as opposed to Other or Dolby Digital) allows the set-top to automatically choose the format preferred by the display. This format then appears at the HDMI output as well as at the Digital Audio output. Your subscribers may not find this behavior optimal for their home theater installations. See **Important Note Regarding the HDMI Interface**, next in this section.

Important Note Regarding the HDMI Interface

The HDMI interface will automatically configure the audio output for a format supported by the television. In the case where the TV that is connected to the set-top does not support a Dolby Digital input, the HDMI interface will automatically select a 2-channel stereo audio configuration instead of Dolby Digital. When the output is configured for 2-channel audio, this configuration is carried over to the other digital audio outputs of the 8300HD. This configuration prevents the subscriber’s Home Theater System or Dolby Digital decoder from providing the full Dolby Digital surround sound effect. The subscriber may override the automatic selection of audio by the HDMI interface by completing the following steps.

1. Press **SETTINGS** twice on the remote control to open the General Settings menu.
2. Press **MOVE UP** or **MOVE DOWN** to select the option Audio: Digital Out.
3. Press **MOVE RIGHT** to select Dolby Digital. This setting will send Dolby Digital audio to the HDMI, DIGITAL AUDIO OUT, and OPTICAL AUDIO OUT connectors on the 8300HD.

Note: If the TV (video/audio monitor) connected to the 8300HD using HDMI is not Dolby Digital capable, it may not produce audio through its speakers when the Audio: Digital Out setting on the 8300HD is set to Dolby Digital. Subscribers can either switch the Audio: Digital Out setting back to HDMI when they are not using the home theater or Dolby Digital decoder, or they can connect the baseband audio outputs (OUT 1 Audio Left and Right) to the TV.

Select the Best Audio Range for TV Viewing or Connection to Theater Systems

Introduction

The Audio Range option affects how the Dolby Digital decoder in the set-top presents the audio to the subscriber. When the original program encoder sends the audio level information to the set-top, the decoder in the set-top uses this information to compress the dynamic range of the audio in varying degrees.

What Audio Compression Works Best?

The amount of compression that is applied to the audio affects the output that your subscribers will hear. You can apply either a narrow, normal, or wide range of compression to the audio. You can select the best audio range for your subscribers, or allow your subscribers to select the range. Read the following information to determine the best range for your subscribers.

Narrow

With a narrow setting, the set-top performs the most extensive dynamic range compression available. The narrow setting boosts the dialog levels to more closely match analog channels. Most subscribers prefer the narrow setting for channel surfing and program viewing because it minimizes the difference in volume levels from channel to channel. The Narrow setting also works well for programs that have lots of loud and soft passages.

Normal

With a normal setting, the set-top preserves a large dynamic range with only a moderate amount of compression. The dialog level may be noticeably quieter on some channels, while the loudest passages will be noticeably louder. Most subscribers will not like the normal setting while channel surfing because the volume level can differ significantly from channel to channel. If your subscribers are using a home theater system that does not support a digital input, they may find that the Normal setting provides more of a movie-theater experience, but subscribers may have to adjust the volume more frequently.

Wide

The wide setting disables dynamic range compression. For multichannel sources, this setting reduces average signal levels to be significantly quieter than those for the normal setting.

Important: The wide setting is *not* recommended for subscriber use; this setting has been provided for testing purposes only.

Recommended Setting

Enable this option to allow subscribers to select the audio range. We recommend that you select narrow as the default.

Select the Best Audio Range for TV Viewing or Connection to Theater Systems, Continued

Allowing Your Subscribers to Select Their Audio Range

To force all of your subscribers to use the same audio range, see **Selecting the Best Audio Range for Your Subscribers**, next in this section.

To allow your subscribers to select their audio range, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.
5. Make sure the option for **Audio: Range** is selected.
Result: When this field is selected, subscribers can change the audio range for their set-top from the General Settings menu.
6. Click **Save**.
Result: The options for Audio Range now appear in the General Settings menu. Subscribers can use this option to control the amount of compression that is applied to the audio.
7. Click **Cancel**.
Result: The DHCT Configure Prompt window opens.
8. Click **Staging Defaults**.
Result: The Set Up Staging Defaults window opens.
9. Select the **Misc Settings** tab.
Result: The Misc Settings tab appears in the forefront.
10. For the **Audio Range** option, select **Narrow** for audio range.
Note: The wide setting is *not* recommended for subscriber use; this setting has been provided for testing purposes only.
11. Click **Save**.
Result: All of your subscribers' set-tops will now default to use the audio range that you selected. Subscribers can use the General Settings menu to change the range.
12. Click **Cancel**.
Result: The DHCT Configure prompt opens.
13. Click **File** and **Close** to close the DHCT Configure prompt.

Select the Best Audio Range for TV Viewing or Connection to Theater Systems, Continued

Selecting the Best Audio Range for Your Subscribers

If you want your subscribers to select their audio range, see **Allowing Your Subscribers to Select Their Audio Range**, earlier in this section.

To select the best audio range for your subscribers, complete the following steps. Following this procedure will cause all of your subscribers to use the same audio range.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront
5. Make sure the option for **Audio: Range** is *not* selected.
Result: When this field is *not* selected, subscribers cannot change the audio range for their set-top. Instead, you must select the range for the subscriber.
6. Select the **Misc Settings** tab to select the audio range for all subscribers.
Result: The Misc Settings tab appears in the forefront.
7. For the Audio Range option, select **Narrow** for audio range.
Important: The wide setting is *not* recommended for subscriber use; this setting has been provided for testing purposes only.
8. Click **Save**.
Result: All of your subscribers' set-tops will now use the audio range that you selected.
9. Click **Cancel**.
Result: The DHCT Configure prompt opens.
10. Click **File** and **Close** to close the DHCT Configure prompt.

Adjust the Volume from Either the Set-Top or the TV

Introduction

The Audio Volume Control option allows subscribers to adjust the volume from either the set-top or the TV. If you do not enable this option, then you must select where the volume is controlled for all of your subscribers.

Recommended Setting

We recommend that you *always* make **Audio: Volume Control** available to subscribers on the General Settings menu and that you select **Fixed** as the default.

Fixed versus Variable Method

Subscriber can use two methods for controlling volume within their home. The two methods are:

- **Fixed.** The subscriber controls the volume using the TV. The remote must be programmed to support audio control on the TV and all other functions on the set-top. The fixed method is the recommended way to configure the set-top to operate. This configuration provides for the best stereo signal for customers using the audio left/right pair or the RF output on set-tops that provide BTSC stereo encoding capability. There are, however, two areas where issues may be encountered:
 - If a subscriber's universal remote does not work with his or her TV, then the subscriber cannot control the volume level with that remote. The subscriber must use one remote to change channels and a second remote to control the volume.
 - If the TV does not work with any remote control (very old TVs), the subscriber cannot control the volume with a remote control.

If either of these issues are encountered, the subscriber may find it more appealing to simply control the volume level and mute functions with the set-top instead of the TV.

- **Variable.** The subscriber can control all audio functions using the set-top. The TV should be set to a comfortable listening level with the set-top set to a level of 25 or higher (this avoids audio degradation issues). This configuration is not recommended because the analog audio output can be degraded if the set-top output level is set to less than 10. There is an advantage that a single remote can be used that works around the issues described for the Fixed method.

Note: If you are using the HDMI output on the set-top and the volume control on the set-top is set to Variable, the set-top will behave as if it is changing the volume when you press Volume + or Volume -, but the volume is not changing. The audio level for HDMI is always Fixed. If you use the HDMI output, set the volume control to Fixed to avoid confusion.

Adjust the Volume from Either the Set-Top or the TV, Continued

Allowing Your Subscribers to Select Whether the Set-Top or TV Controls the Volume

To allow your subscribers to select whether the set-top or TV controls the volume, complete the following steps.

Note: To force all of your subscribers to use either the set-top or TV to control the volume, see **Selecting Where the Volume is Controlled for Your Subscribers**, next in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.

5. Make sure the option for **Audio: Volume Control** is selected.

Result: When this field is selected, subscribers can control whether the volume is controlled from the set-top or the TV.

6. Click **Save**.

Result: The options for Audio Volume Control now appear in the General Settings menu for the set-top.

7. Click **Cancel**.

Result: The DHCT Configure Prompt window opens.

8. Click **Staging Defaults**.

Result: The Set Up Staging Defaults window opens.

9. Select the **Misc Settings** tab.

Result: The Misc Settings tab appears in the forefront.

Adjust the Volume from Either the Set-Top or the TV, Continued

10. For the Audio Volume Control option, select **Fixed**.

Note: The Fixed setting adjusts the volume output to its maximum setting of 30 and disables volume control on the set-top. The Variable setting allows the subscriber to control the volume for the set-top through the remote control.

11. Click **Save**.

Result: All of your subscribers will use the volume control that you have selected for them. Subscribers can use the General Settings menu to change the volume control.

12. Click **Cancel**.

Result: The DHCT Configure prompt opens.

13. Click **File** and **Close** to close the DHCT Configure prompt.

Adjust the Volume from Either the Set-Top or the TV, Continued

Selecting Where the Volume is Controlled for Your Subscribers

If you want your subscribers to select whether the set-top or the TV controls the volume, see **Allowing Your Subscribers to Select Whether the Set-Top or TV Controls the Volume**, earlier in this section.

To select where the volume is controlled for your subscribers, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.
5. Make sure the option for **Audio: Volume Control** is *not* selected.
Result: When this field is *not* selected, subscribers cannot choose whether the set-top or the TV controls the volume. Instead, you determine where the volume is controlled for all your subscribers.
6. Select the **Misc Settings** tab to select where the volume is controlled for all subscribers.
Result: The Misc Settings tab appears in the forefront.
7. For the Audio Volume Control option, select **Fixed**.
Result: The Fixed setting adjusts the volume output to its maximum setting (30) and disables volume control on the set-top. The Variable setting allows the subscriber to control the volume for the set-top through the remote control for the TV or set-top.
8. Click **Save**.
Result: Your subscribers will adjust the volume level using their TV or home theater.
9. Click **Cancel**.
Result: The DHCT Configure prompt opens.
10. Click **File** and **Close** to close the DHCT Configure prompt.

Allow Subscribers to Select the Audio Source for Any Program That Provides an Alternate Audio Track

Introduction

The Has SAP option allows subscribers to select the audio source for any program that provides an alternate audio track. The Has SAP option behaves differently depending upon whether subscribers tune to an analog or a digital channel. If you enable the Has SAP option, the Quick Settings menu displays one of the following options:

- **Enable/Disable SAP.** This option appears on the Quick Settings menu when the subscriber presses Settings from an *analog* channel. The subscriber can use this option to turn SAP on or off for an analog channel.
- **Choose SAP Language.** This option appears on the Quick Settings menu when the subscriber presses Settings from a *digital* channel. The subscriber can use this option to select a different audio language for a digital service.

If you do not enable this option, the Quick Settings menu does not display any options for subscribers to enable or disable SAP or to choose a different language for a digital service.

Frequently Asked Questions

Before you decide whether to enable the Has SAP option, refer to the list of frequently asked questions about SAP.

Q1: What is SAP?

A: Second Audio Program. This feature allows cable service providers to offer subscribers a second audio option for their programming. The other option may be a different language or another audio track, such as the weather or a sports event.

Q2: When I tune to a program, the speaker is speaking in Spanish. How can I hear the program in English?

A: To hear the program in English, complete the following steps.

1. Press **Settings** to access the Quick Settings menu.
2. Does the Quick Settings menu display Disable SAP?
 - If **yes**, press **Select** to disable SAP. The program should now be in English.
 - If **no**, go to step 3.
3. Does the Quick Settings menu display Choose SAP Language?
 - If **yes**, scroll to English and press **Select**. The program should now be in English.
 - If **no**, the Has SAP option has not been enabled for this set-top.

Allow Subscribers to Select the Audio Source for Any Program That Provides an Alternate Audio Track, Continued

A Note About SAP

Please note that SAP (Second Audio Program) is an Analog Feature and that Secondary Language is a feature of Digital Services. For SARA Versions 1.41 and later, modifying the Secondary Language can enable the SAP feature on those analog channels that carry SAP. Changing to a Secondary Language from Quick Settings will switch to the alternate language on the digital channel, but will switch back to the primary language if the subscriber tunes to another channel.

Recommended Setting

Enable this option to allow subscribers to select a different audio program from the Quick Settings menu.

Allowing Subscribers to Select a Different Audio Source for Any Program That Provides a Secondary Audio Track

To allow your subscribers to select a different audio for any digital programs that provide a secondary audio track, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **Quick Settings** tab.
Result: The Quick Settings tab appears in the forefront.
5. Do you want to allow your subscribers to select a different audio for programs that provide a secondary track using the Quick Settings menu?
 - If **yes**, be sure that the option for **Has SAP** (Secondary Audio Program) is selected. Subscribers can enable or disable SAP for analog channels or choose a secondary audio for *digital* programs that have a secondary audio track.
 - If **no**, be sure that the option for **Has SAP** (Secondary Audio Program) is *not* selected. The Quick Settings menu does not contain an option to enable or disable SAP for *analog* channels or to choose a secondary audio for digital programs that have a secondary audio track
6. Click **Save**.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Disable Audio and Video Synchronization

Introduction

Some set-tops do not play audio until the video is displayed. For broadcast services, this behavior is not an issue because broadcast services send the video in real-time and the delay is not noticed. For services that send video as a slideshow instead of sending it in real-time (such as Music Choice), the delay is more noticeable.

For services where the delay is noticeable, you can disable the audio and video synchronization by setting the NOAVSYNC parameter. When you set this parameter, audio begins as soon as the channel is tuned; the visual component of channel appears as soon as the system downloads a full video frame. The NOAVSYNC parameter is applicable *only* when the watchtv application is used to present the service.

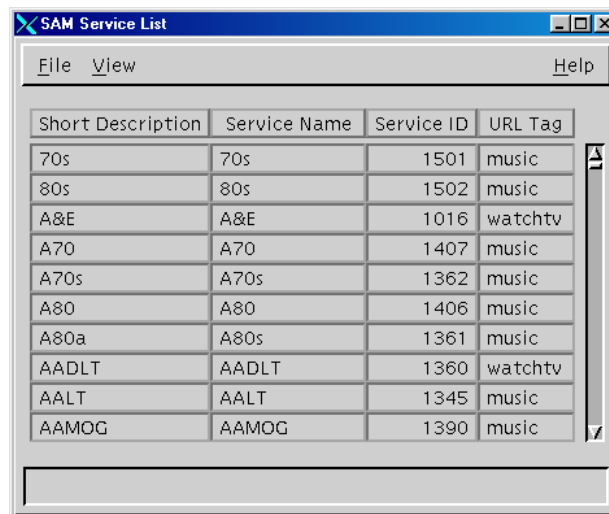
The NOAVSYNC parameter has no effect on the Explorer 3250HD set-top and DVR set-tops. Audio is always played when it is available on these set-tops.

Disabling Audio and Video Synchronization for Services

Follow these instructions to disable audio and video synchronization for services.

1. On the DNCS Administrative Console, click the **Application Interface Modules** tab.
2. Click **SAM Service**.

Result: The SAM Service List window opens.



The screenshot shows a window titled "SAM Service List" with a menu bar containing "File", "View", and "Help". Below the menu bar is a table with four columns: "Short Description", "Service Name", "Service ID", and "URL Tag". The table contains ten rows of service data.

Short Description	Service Name	Service ID	URL Tag
70s	70s	1501	music
80s	80s	1502	music
A&E	A&E	1016	watchtv
A70	A70	1407	music
A70s	A70s	1362	music
A80	A80	1406	music
A80a	A80s	1361	music
AADLT	AADLT	1360	watchtv
AALT	AALT	1345	music
AAMOG	AAMOG	1390	music

Disable Audio and Video Synchronization, Continued

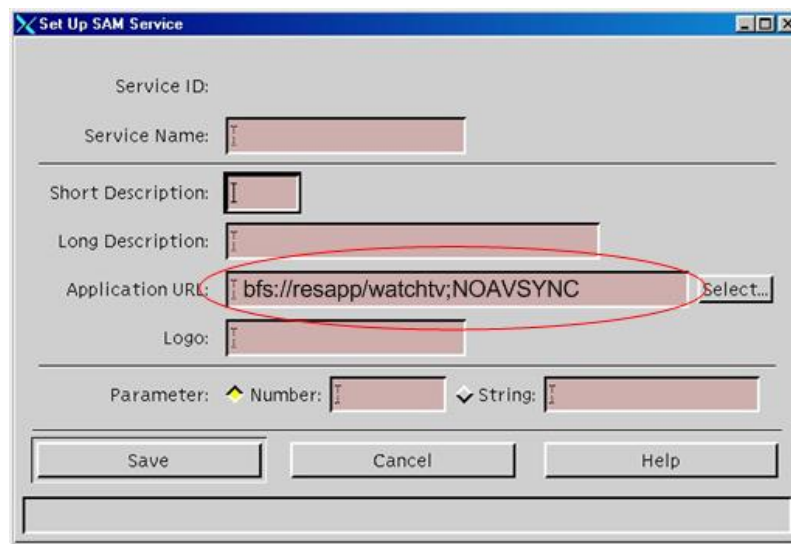
3. Double-click an existing service for which you want to disable audio and video synchronization.

Result: The Set Up SAM Service window opens.

4. Replace the current entry that appears in the **Application URL** field with the following:

bfs://resapp/watchtv;NOAVSYNC

Result: The screen should appear as follows:



The screenshot shows the 'Set Up SAM Service' window. It has a title bar with a close button. The window contains several text input fields: 'Service ID:', 'Service Name:', 'Short Description:', 'Long Description:', 'Application URL:', and 'Logo:'. The 'Application URL' field is highlighted with a red oval and contains the text 'bfs://resapp/watchtv;NOAVSYNC'. To the right of this field is a 'Select...' button. Below these fields are two dropdown menus for 'Parameter:' with 'Number' and 'String' options. At the bottom are three buttons: 'Save', 'Cancel', and 'Help'.

5. Click **Save**.

Results:

- The system saves the service information in the DNCS database and closes the Set Up SAM Service window.
 - The SAM Service List window updates to include the new service with its system-assigned service ID and application URL tag.
6. Repeat steps 1 through 5 for every service for which you want to disable audio and video synchronization.

Select the Language for the Wireless Keyboard

Introduction

The Language: Keyboard option allows the subscriber to choose the default language that the wireless keyboard will use to communicate with the set-top. If you do not enable this option, then you must select the language that the wireless keyboard will use to communicate with the set-top for all of your subscribers. The available languages are English and Canadian French.

Recommended Setting

Choose the language that is most common to your area.

Allowing Your Subscribers to Select the Language for the Wireless Keyboard

To force all of your subscribers to use the same language for the wireless keyboard, see **Selecting the Language for the Wireless Keyboard for Your Subscribers**, next in this section.

To allow your subscribers to select the language that the wireless keyboard uses to communicate with the set-top, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.

2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.

5. Make sure the option for **Language: Keyboard** is selected.

Result: When this option is selected, subscribers can select the language that the wireless keyboard will use to communicate with the set-top from the General Settings menu.

6. Click **Save**.

Result: The General Settings menu of the set-top will now display a list of languages that the wireless keyboard can use to communicate with the set-top.

7. Click **Cancel**.

Result: The DHCT Configure prompt window opens.

Select the Language for the Wireless Keyboard, Continued

8. Click **Staging Defaults**.
Result: The Set Up Staging Defaults window opens.
9. Select the **Base Application** tab to select the language for the wireless keyboard for all your subscribers.
Result: The Base Application tab appears in the forefront.
10. In the **Keyboard Language** field, select the language for the wireless keyboard that you want all of your subscribers to use to communicate with the set-top.
11. Click **Save**.
Result: All of your subscribers' wireless keyboards will now use the selected language to communicate with the set-top. Subscribers can use the General Settings Menu to change the keyboard language.
12. Click **Cancel**.
Result: The DHCT Configure prompt opens.
13. Click **File** and **Close** to close the DHCT Configure prompt.

Selecting the Language for the Wireless Keyboard for Your Subscribers

To allow your subscribers to select the language that the wireless keyboard will use to communicate with the set-top, see **Allowing Your Subscribers to Select the Language for the Wireless Keyboard**, earlier in this section.

To select the language that the wireless keyboard will use to communicate with the set-top for all of your subscribers, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.

Select the Language for the Wireless Keyboard, Continued

5. Make sure the option for **Language: Keyboard** is *not* selected.

Result: When this option is *not* selected, subscribers cannot select the language that the wireless keyboard uses to communicate with the set-top. Instead, you must select the language for the wireless keyboard for the subscriber.

6. Select the **Base Application** tab to select the language for the wireless keyboard for all your subscribers.

Result: The Base Application tab appears in the forefront.

7. In the **Keyboard Language** field, select the language for the wireless keyboard that you want all of your subscribers to use to communicate with the set-top.

8. Click **Save**.

Result: All of your subscribers' wireless keyboards will now use the selected language to communicate with the set-top.

9. Click **Cancel**.

Result: The DHCT Configure prompt opens.

10. Click **File** and **Close** to close the DHCT Configure prompt.

Show Volume Level on LED When Adjusting Volume from the Set-Top

Introduction

The set-top assigns a value between 0 and 30 to indicate the current volume level. A volume level of zero (0) indicates no audio, and a volume level of 30 indicates the highest volume level. If you enable Show Volume on LEDs During Update, the front panel of the set-top will display a value of 0 through 30 when the subscriber presses Volume + or Volume -. The volume control must be set to *Variable* to use this feature. See *Adjust the Volume from Either the Set-Top or the TV* earlier in this chapter.

Note: For set-tops with only POWER LED indicators, this setting is not applicable.

Find the Optimum Level

To find the optimum level, tune to the loudest channel that you encounter and with the set-top Volume Control set to 25. Then adjust the volume on the TV to a comfortable level.

Recommended Setting

We recommend that you enable the Show Volume on LEDs During Update feature.

Showing Volume Level on LED When Adjusting Volume from the Set-Top

To show the volume level on the LED of the set-top as the subscriber adjusts the volume on the set-top, complete the following steps..

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

The DHCT Configure Prompt window opens.

3. Select **Global**.

The Set Up Global DHCT Configuration window opens.

4. Select the **Misc Settings** tab.

The Misc Settings tab appears in the forefront.

5. Make sure the **Show Volume on LEDs During Update** field is selected.
6. Click **Save**.

Result: When subscribers adjust the volume with the set-top, the LED displays the volume level (0-30).

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click File and Close to close the DHCT Configure prompt.

Chapter 3

Channel Selection Options

Overview

Introduction

Channel surfing allows subscribers to quickly see what's on TV. This chapter provides the options that you can configure through SARA to provide your subscribers with popular ways to select channels.

What Channel Selection Options Can You Configure?

You can configure the following channel selection options for SARA:

- Display the next highest authorized channel when subscribers enter an invalid channel number
- Skip unauthorized channels while channel surfing
- Select the channel that the set-top tunes to at power on
- Specify the maximum number of digits required to change channels on the set-top
- Designate channel 3 or 4 as the RF Output Channel
- Specify how the LAST key functions on the remote control
- Add or remove channels from the Favorite Channel list
- Set up dual sources and hide services from CableCARD™ hosts

Important:

- The procedures in this chapter cover a global configuration. When you send a global configuration, *all* set-tops in your system are affected.
- If you want to send a configuration to all the set-tops in a hub, see **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1.
- If you want to change a setting for only one set-top, see **Send a Configuration to a Single Set-Top** in Chapter 1.
- If you want to set the Staging Defaults, see **Set Staging Defaults** in Chapter 1.

Overview, Continued

In This Chapter

This chapter contains the following topics.

Topic	See Page
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Skip Unauthorized Channels While Channel Surfing	3-5
Select the Channel That the Set-Top Tunes to at Power On	3-7
Specify the Number of Digits Required to Change Channels on the Set-Top	3-12
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Add or Remove Channels From the Favorite Channel List	3-18
Setting Up Dual Sources and Hiding Services from One-Way CableCARD Hosts	3-19

Display the Next Highest Authorized Channel When a Subscriber Enters an Invalid Channel Number

Introduction

The Invalid Numeric Entry Chooses Next Highest Channel option lets you specify whether the set-top will tune to the next highest channel when the subscriber enters an invalid channel number on the remote control. For example, suppose there are no channels between 10 and 50. If you select this option, when the subscriber tries to tune to channel 15, the set-top will automatically tune to channel 50. If you do not enable this option, the channel banner displays question marks in the channel field, the LED on the front panel of the set-top blinks, and the TV remains tuned to the channel the subscriber was watching.

Recommended Setting

Enable this option to allow invalid channel numbers to display the next highest authorized channel.

Allowing Subscribers to Tune to the Next Highest Authorized Channel When They Enter an Invalid Channel Number

To allow subscribers to tune to the next highest authorized channel when they enter an invalid channel number, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **Base Application** tab.
Result: The Base Application tab appears in the forefront.
5. Do you want to allow subscribers to tune to the next highest authorized channel when they enter an invalid channel number?
 - If **yes**, be sure the Invalid Numeric Entry Chooses Next Highest Channel Option is selected.
 - If **no**, be sure the Invalid Numeric Entry Chooses Next Highest Channel option is *not* selected. When subscribers enter an invalid channel number, the channel banner displays three question marks (???) in the channel banner, the LED on the front panel blinks, and the TV remains tuned to the channel the subscriber was watching.
6. Click **Save**.
Result: Your subscribers' set-tops will respond as you specified in step 5.

Display the Next Highest Authorized Channel When a Subscriber Enters an Invalid Channel Number, Continued

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Skip Unauthorized Channels While Channel Surfing

Introduction

The Skip Unauthorized Channels option allows subscribers to skip over unauthorized channels while channel surfing.

Benefits of Enabling or Disabling the Skip Unauthorized Channels Option

Before you implement this feature, you should consider how many packages you offer and how you arrange your channels. For example, if you arrange all HBO channels in the 900 range, subscribers who are not authorized for HBO must scroll through all the 900s to find channels that do not require authorization. In this scenario, you may want to enable the **Skip Unauthorized Channels** option to prevent the inconvenience of stopping on every unauthorized channel. However, if you interlace premium channels, such as Showtime and HBO, with channels that all subscribers can view, you may want to disable the **Skip Unauthorized Channels** option. When you disable this option, the set-top displays the unauthorized service text to let subscribers know about other channels that are available. This scenario provides you with a “marketing opportunity” for your premium services.

Recommended Setting

Enable the option to allow subscribers to skip unauthorized channels.

Allowing Subscribers to Skip Unauthorized Channels While Channel Surfing

To allow subscribers to skip unauthorized channels while channel surfing, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **Base Application** tab.

Result: The Base Application tab appears in the forefront.

5. Do you want to allow subscribers to skip unauthorized channels while channel surfing?
 - If **yes**, be sure the **Skip Unauthorized Channels** option is selected.
 - If **no**, be sure the **Skip Unauthorized Channels** option is *not* selected.When your subscribers surf to an unauthorized channel, the set-top displays a screen with text that the service is unauthorized.

Skip Unauthorized Channels While Channel Surfing, Continued

6. Click **Save**.

Result: All of your subscribers' set-tops will respond as you specified in step 5.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Select the Channel That the Set-Top Tunes to at Power On

Introduction

The Power On Channel option allows subscribers to select the channel the set-top tunes to at power on.

Note: If you do not enable this option, then you must select the channel that the set-top tunes to at power on for all of your subscribers.

Recommended Setting

Enable this option to allow subscribers to select which channel the set-top tunes to when powered on. The power on channel should be a broadcast video service.



CAUTION:

The power on channel should never be set to a VOD or xOD channel or to a channel that launches a third-party application. Tuning these channels may initiate two-way communication over the network that can lead to increased boot times and can delay the subscriber's ability to watch TV after a software download.

If you disable this option, you must select the channel for your subscribers. The choices are Lowest Channel, Last Selected Channel, and Channel Number. We recommend that you select the Channel Number option and pick a channel that does not launch an application.

Allowing Subscribers to Select the Power On Channel for the Set-Top

To force all of your subscribers to tune to the same channel at power on, see **Selecting the Power On Channel for Your Subscribers**, next in this section.

To allow subscribers to select the channel that the set-top tunes to at power on, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.

Select the Channel That the Set-Top Tunes to at Power On, Continued

5. Make sure the option for **Power On Channel** is selected.

Result: When this field is selected, subscribers can select the channel that the DCHT tunes to at power on from the General Settings menu on the set-top.

6. Click **Save**.

Result: The General Settings menu of the set-top will now display the following options for the channel that the set-top tunes to at power on:

- **Last Channel.** The set-top tunes to the last channel that was viewed each time the set-top is powered on. This is the recommended setting.
- **Channel Number.** The menu displays a list of channels from which the subscriber can pick a channel that the set-top should tune each time the set-top is powered on. This setting causes the set-top to tune to the channel specified regardless of the hub's channel map. A different channel can be used on each hub if the power on option is selected as being configurable by hub. (See **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1 for more details.)



CAUTION:

The power on channel should never be set to a VOD or xOD channel or to a channel that launches a third-party application. Tuning these channels may initiate two-way communication over the network that can lead to increased boot times and can delay the subscriber's ability to watch TV after a software download.

7. Click **Cancel**.

Result: The DHCT Configure prompt window appears.

8. Click **Staging Defaults**.

Result: The Set Up Staging Defaults window opens.

9. Select the **Base Application** tab to select the power on channel for all subscribers.

Result: The Base Application tab appears in the forefront.

Select the Channel That the Set-Top Tunes to at Power On, Continued

10. For the **Power On Channel** option, select one of the following settings for the DCHT to tune to at power on:

- **Lowest Channel.** The set-top tunes to the lowest channel in the channel map. The channel displayed would automatically change if the channel map is changed.

Note: Because the set-top lets the subscriber choose a channel number to tune to at power on, the Lowest Channel option is not displayed on the General Settings menu on the set-top. This option can still be selected as a Staging Default or sent as a global configuration.

- **Last Selected Channel.** The set-top tunes to the last channel that was viewed each time the set-top is powered on. This is the recommended setting because it allows subscribers to tune to the last channel that was being viewed when the set-top was powered off.
- **Channel Number.** The menu displays a list of channels from which the subscriber can pick a channel that the set-top should tune each time the set-top is powered on. This setting causes the set-top to tune to the channel specified regardless of the hub's channel map.



CAUTION:

The power on channel should never be set to a VOD or xOD channel or to a channel that launches a third-party application. Tuning these channels may initiate two-way communication over the network that can lead to increased boot times and can delay the subscriber's ability to watch TV after a software download.

Note: A different channel can be used on each hub if the power on option is selected as being configurable by hub. (See **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1 for more details.)

11. Click **Save**.

Result: All of your subscribers' set-tops will now tune to the power on channel that you selected. Subscribers can use the General Settings Menu to change the power on channel.

12. Click **Cancel**.

Result: The DHCT Configure prompt opens.

13. Click **File** and **Close** to close the DHCT Configure prompt.

Select the Channel That the Set-Top Tunes to at Power On, Continued

Selecting the Power On Behavior for Your Subscribers

If you want to select the power-on behavior for all of your subscribers, complete the following steps.

Note: To allow subscribers to select the power on channel for the set-top, see **Allowing Subscribers to Select the Power On Channel for the Set-Top**, earlier in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.

5. Make sure the option for **Power On Channel** is *not* selected.

Result: When this field is *not* selected, subscribers cannot select the power on channel for their set-top. Instead, you must select the channel for the subscriber.

6. Select the **Base Application** tab to select the power on channel for all subscribers.

Result: The Base Application tab appears in the forefront.

Select the Channel That the Set-Top Tunes to at Power On, Continued

7. For the Power On Channel option, select one of the following settings for the DCHT to tune to at power on:
 - **Lowest Channel.** The set-top tunes to the lowest channel in the channel map. The channel displayed would automatically change if the channel map is changed.

Note: Because the set-top lets the subscriber choose a channel number to tune to at power on, the Lowest Channel option is *not displayed* on the General Settings menu on the set-top. This option can still be selected as a Staging Default.
 - **Last Selected Channel.** The set-top tunes to the last channel that was viewed each time the set-top is powered on. This is the recommended setting because it allows the subscriber to tune to the last channel that was being viewed when the set-top was powered off.
 - **Channel Number.** The menu displays a list of channels from which the subscriber can pick a channel that the set-top should tune each time the set-top is powered on. This setting causes the set-top to tune to the channel specified regardless of the hub's channel map.



CAUTION:

The power on channel should never be set to a VOD or xOD channel or to a channel that launches a third-party application. Tuning these channels may initiate two-way communication over the network that can lead to increased boot times and can delay the subscriber's ability to watch TV after a software download.

Note: A different channel can be used on each hub if the power on option is selected as being configurable by hub. (See **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1 for more details.)

8. Click **Save**.

Result: All of your subscribers' set-tops will now tune to the power on channel that you selected.
9. Click **Cancel**.

Result: The DHCT Configure prompt opens.
10. Click **File** and **Close** to close the DHCT Configure prompt.

Specify the Number of Digits Required to Change Channels on the Set-Top

Introduction

The Number of Digit Entry option lets you specify the number of digits that a subscriber must enter to immediately change channels on the set-top. To allow subscribers to access channels above 999, this field must contain a value of 4.

Example:

When this option is set to 4, the subscriber must do one of the following to directly tune to channel 100:

- Enter 0100
- Enter 100 and press **Select** on the remote
- Enter 100 and wait a few seconds

Specifying the Maximum Number of Digits Required to Change Channels on the Set-Top

To specify the maximum number of digits that a subscriber must enter to change channels on the set-top, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **Base Application** tab.

Result: The Base Application tab appears in the forefront.

5. In the **Number of Digit Entry** field, enter the maximum number of digits that the subscriber must enter to change channels. The values are 3 or 4.

Important: To allow subscribers to access channels above 999, this field must contain 4.

6. Click **Save**.
7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Select Channel 3 or 4 for the RF Output on the Set-Top

Introduction

The RF Output Channel option allows subscribers to select either channel 3 or 4 as the RF Output channel for the set-top.

Note: If you do not enable this option, then you must select either channel 3 or 4 as the RF output channel for all of your subscribers.

Recommended Setting

Disable this option to prevent subscribers from selecting the RF output channel on the set-top.

Allowing Subscribers to Select the RF Output Channel for the Set-Top

To allow subscribers to select channel 3 or 4 as the RF output channel for the set-top, complete the following steps.

Note: To force all of your subscribers to use either channel 3 or 4 as the RF output channel for the set-top, see **Selecting the RF Output Channel for the Set-Top for Your Subscribers**, next in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.
5. Make sure the option for **RF Output Channel** is selected.
Result: When this field is selected, subscribers can select channel 3 or 4 as the RF Output Channel for the set-top.
6. Click **Save**.
Result: The General Settings menu of the set-top will now display the options for using channel 3 or 4 as the RF Output Channel for the set-top.
7. Click **Cancel**.
Result: The DHCT Configure prompt window appears.
8. Click **Staging Defaults**.
Result: The Set Up Staging Defaults window opens.

Select Channel 3 or 4 for the RF Output on the Set-Top, Continued

9. Select the **Base Application** tab to select the RF output channel for all your subscribers.
Result: The Base Application tab appears in the forefront.
10. For the **RF Output Channel** option, select either channel **3** or **4**.
11. Click **Save**.
Result: All of your subscribers' set-tops will now use the RF output channel that you selected. Subscribers can use the General Settings Menu to change the RF output channel.
12. Click **Cancel**.
Result: The DHCT Configure prompt opens.
13. Click **File** and **Close** to close the DHCT Configure prompt.

Selecting the RF Output Channel for the Set-Top for Your Subscribers

To select the RF output channel for your subscribers, complete the following steps.

Note: To allow subscribers to designate the RF output channel for the set-top, see **Allowing Subscribers to Select the RF Output Channel for the Set-Top**, earlier in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.
5. Make sure the option for RF Output Channel is *not* selected.
Result: When this field is *not* selected, subscribers cannot select the RF Output channel for the set-top. Instead, you must select the RF output channel for the subscriber.
6. Select the **Base Application** tab to select the RF output channel for all your subscribers.
Result: The Base Application tab appears in the forefront.
7. For the RF Output Channel option, select either channel **3** or **4**.

Select Channel 3 or 4 for the RF Output on the Set-Top, Continued

8. Click **Save**.

Result: All of your subscribers' set-tops will now use the RF output channel that you selected.

9. Click **Cancel**.

Result: The DHCT Configure prompt opens.

10. Click **File** and **Close** to close the DHCT Configure prompt.

Specify How the LAST Key Functions

Introduction

The LAST Key Uses Channel Up/Down option allows you to specify how the LAST key on the remote control functions.

For example, suppose a subscriber begins on channel 2 and presses 9 to go to channel 9. The subscriber then presses CH+ (channel up) to go to channel 10, and then presses CH+ again to go to channel 11. Then the subscriber presses LAST on the remote control.

Depending on which function you selected for this option, one of the following results occurs:

- If you enable this option, the set-top displays channel 10 (the last channel that was tuned by any means).
- If you do not enable this option, the set-top displays channel 9 (the last channel that was directly tuned to by entering the channel number on the remote control).

Recommended Setting

Enable the option to cause the LAST key to display the last channel that the subscriber tuned to by pressing the CH+ or CH- keys on the remote control (also known as channel surfing).

Specifying How the LAST Key Functions

To specify how the LAST key on the remote control functions, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **Base Application** tab.
Result: The Base Application tab appears in the forefront.

Specify How the LAST Key Functions, Continued

5. For the LAST Key Uses Channel Up/Down option, do one of the following:
 - If you enable this option, pressing the LAST key on the remote control displays the last channel tuned regardless of whether the subscriber surfed to the channel with the CH + or CH- keys, or directly tuned to the channel by entering the channel number on the remote control.
 - If you disable the option, pressing the LAST key on the remote control displays the last channel that was tuned to directly by entering a channel number on the remote control.
6. Click **Save**.

Result: The LAST key on the remote control will now function as you specified in step 5.
7. Click **Cancel**.

Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Add or Remove Channels From the Favorite Channel List

Introduction

The Has Favorite option allows subscribers to use the Quick Settings menu to add or remove the currently tuned channel on the Favorite Channel list. If you do not enable this option, the Quick Settings menu will not contain an option for subscribers to add or remove channels on the Favorite Channels list. Subscribers must use the General Settings menu to add or remove programs from the Favorite Channel list.

Recommended Setting

Enable this option to make the Favorite Channels feature available on the Quick Settings menu.

Allowing Subscribers to Add or Remove Channels From the Favorite Channel List Using Quick Settings

To allow subscribers to add or remove channels from the Favorite Channel list, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.

2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **Quick Settings** tab.

Result: The Quick Settings tab appears in the forefront.

5. Do you want to allow subscribers to add or remove channels from the Favorite Channel list?

- If **yes**, be sure the option for **Has Favorite** is selected. When this field is selected, subscribers can add or remove channels from the Favorite Channels list of the Quick Settings menu on the set-top.
- If **no**, be sure the option for **Has Favorite** is *not* selected. When this field is not selected, the Quick Settings menu does not provide an option for subscribers to add or remove channels from the Favorite Channels list.

Note: Regardless of the setting you choose, subscribers can still manage their favorite channels from the General Settings menu.

6. Click **Save**.

Result: The set-top responds as you specified in step 5.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Setting Up Dual Sources and Hiding Services from One-Way CableCARD Hosts

Introduction

System operators have identified a need for CableCARD™ hosts to tune different sources when a particular service is selected based on the capabilities of the host. Fully interactive set-tops with a CableCARD slot can operate as a two-way CableCARD host, while the majority of retail CableCARD hosts do not and are one-way only. For example, the vast majority of CableCARD host televisions sold at retail stores are one-way devices and cannot perform interactive services like VOD.

A new feature in the Digital Network Control System (DNCS) allows you to specify two sources for a single Service Application Manager (SAM) service. This feature allows you to identify one source for two-way CableCARD hosts, as well as existing set-tops with embedded security, and another source for one-way CableCARD hosts.

In addition to adding the ability to tune to a different source, a second capability has been provided. You can now hide services from a one-way CableCARD host. This additional capability allows you to offer selected services to only the existing embedded security set-top population as well as to the newer two-way CableCARD host devices.

This section provides the procedure for specifying two sources for a single SAM service. This procedure is useful when provisioning one-way CableCARD host devices (for example, most retail televisions with CableCARD slots). A procedure for hiding services from one-way CableCARD hosts is also provided. This procedure does not affect services on two-way hosts such as newer CableCARD host-equipped set-tops

How One-Way CableCARD Hosts Get Services

The DNCS builds the channel map (that is passed from the CableCARD module to the CableCARD host) by looking for SAM services with a watchtv or music application URL. Typically, any service using one of these URLs will be put into the CableCARD channel map. The DNCS allows you to add an extension to the SAM services application URL in order to cause one of the following behaviors:

- The CableCARD host will tune to an alternate source ID when the service is selected.
- The DNCS will not include the service in the CableCARD channel maps when they are built.

In addition, you can use this feature to prevent PPV and IPPV services from displaying as "black screen" services on one-way CableCARD hosts. This condition is prevented by modifying the URL for the event use service that is associated with the PPV/IPPV service. As indicated earlier, these modifications only impact the service information sent to one-way hosts.

Setting Up Dual Sources and Hiding Services from One-Way CableCARD Hosts, Continued

System Requirements

These features are now available in the following system releases (SRs):

- SR 2.2 Service Pack 3*
- SR 2.5/3.5/4.0 Service Pack 1
- SR 4.0*
- SR 2.7/3.7/4.2

***Note:** For system releases marked with an asterisk, IPPV/PPV services are not hidden from CableCARD hosts.

Related Publications

You may find the following publications useful as resources when you implement the procedures in this section.

- *Enhancing Your Subscribers' Experience: SARA Configurable Options* (part number 4002178, published September 2003)
- *Digital Network Control System Online Help (PC) Version 3.2.0.3 for SR 2.2/3.2* (part number 4003403, published October 2003)

SAM Service Configuration Options

This section provides the information you need for configuring the SAM service for using dual sources or for hiding services from the CableCARD host. For detailed steps on modifying a SAM service, see the online Help for your Digital Network Control System (DNCS).

Assumptions

This information assumes that the following conditions have been met:

- A DNCS release with the CableCARD Alternate Source feature has been installed.
- The new digital source definitions have been added to the DNCS.

Setting Up Dual Sources and Hiding Services from One-Way CableCARD Hosts, Continued

Specifying Two Sources for a Single SAM Service

To illustrate the dual source concept, assume that in your network you have two services: NBC analog and NBC digital. The analog NBC service uses source ID 1001. The digital NBC service uses source ID 2001. You want one-way CableCARD hosts to tune to the analog source ID (1001). You want the all other devices to tune to the digital source ID (2001).

To specify two sources for a single SAM service, you need to modify the Set Up SAM Service window as follows:

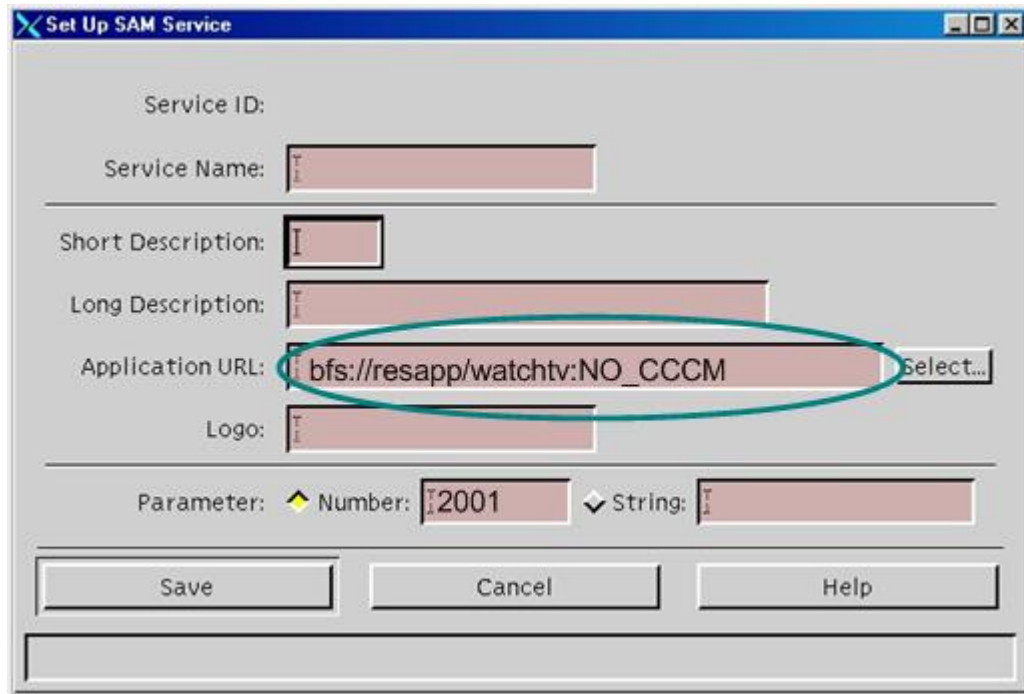
- Modify the existing Application URL to include the CCCM_SRC=#### (where #### is the source ID of the service that you want the CableCARD host to display). In our example, the URL would be `bfs://resapp/watchtv;CCCM_SRC=1001`.
- Confirm that the number in the Parameter field is the source ID of the service that you want the set-top to display. In our example, the source ID would be 2001.

The screenshot shows the 'Set Up SAM Service' dialog box. The 'Application URL' field is highlighted with a green circle and contains the text 'bfs://resapp/watchtv;CCCM_SRC = 1001'. The 'Parameter' field, specifically the 'Number' sub-field, is also highlighted with a green circle and contains the value '2001'. Other fields include 'Service ID', 'Service Name', 'Short Description', 'Long Description', 'Logo', and 'String'. At the bottom are 'Save', 'Cancel', and 'Help' buttons.

Setting Up Dual Sources and Hiding Services from One-Way CableCARD Hosts, Continued

Hiding Services from CableCARD Hosts

To hide services from one-way CableCARD hosts, you create or modify the Application URL using the NO_CCCM modifier. Adding this modifier causes the DNCS to build CableCARD channel maps without including this service. In our example, the URL would be `bfs://resapp/watchtv;NO_CCCM`. The parameter field still identifies the source ID of the service that set-tops will display.



The screenshot shows a Windows-style dialog box titled "Set Up SAM Service". It contains several input fields: "Service ID:", "Service Name:", "Short Description:", "Long Description:", "Application URL:", and "Logo:". The "Application URL:" field is highlighted with a red oval and contains the text "bfs://resapp/watchtv;NO_CCCM". Below these fields are "Parameter:" and "String:" fields. The "Parameter:" field has a dropdown arrow and the value "2001". At the bottom are "Save", "Cancel", and "Help" buttons.

Recommended Housekeeping

After you have configured your system for dual sources or you have hidden a service from a one-way CableCARD host, you should update the channel map to make the changes take effect. You can trigger this update by following the recommended housekeeping steps in this section or by forcing an update to the channel map. See **Forcing a Channel Map Update**, next in this section.

When you move to a dual source configuration, you may have some SAM services configured for channels that will no longer be used in the channel map. Take the following housekeeping steps to remove any unused SAM services:

- Delete the IPG mapping to this service using the IPG Service List GUI on the DNCS.
- After you delete the IPG mapping to this service, you should also delete the SAM service on the SAM Service List GUI on the DNCS.

Setting Up Dual Sources and Hiding Services from One-Way CableCARD Hosts, Continued

Forcing a Channel Map Update

If you do not take the steps under **Recommended Housekeeping**, you must force a channel map update to make your configuration changes take effect. Open any channel map from the Display Channel Map List user interface by double-clicking on the channel map name and click Save. Then close the Display Channel Map List user interface. Note that modifications to the channel map are not necessary. You just need to open and save the channel map to force the update

Chapter 4

Front Panel Display Options

Overview

Introduction

The LED on the front panel of the set-top offers useful information to the subscriber, such as the time of day or the tuned channel number. This chapter provides the options that you can configure through SARA for the LED on the set-top.

What Front Panel Display Options Can You Configure?

You can configure the following front panel display options for SARA:

- Select whether the LED on the set-top displays the time of day or a blank screen when powered off.
- Select whether the LED on the set-top displays the time of day or channel number when powered on.
- Prompt subscribers for a PIN on the LED of the set-top for channels that require a PIN.
- Specify the minimum number of digits to display for channels on the LED on the front panel of the set-top.

Important:

- The procedures in this chapter cover a global configuration. When you send a global configuration, *all* set-tops in your system are affected.
- If you want to send a configuration to all the set-tops in a hub, see **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1.
- If you want to change a setting for only one set-top, see **Send a Configuration to a Single Set-Top** in Chapter 1.
- If you want to set the Staging Defaults, see **Set Staging Defaults** in Chapter 1.

Overview, Continued

In This Chapter

This chapter contains the following topics.

Topic	See Page
Display the Time of Day or a Blank Screen When the Set-Top is Powered Off	4-3
Display the Time of Day or Channel Number At Power On	4-6
Prompt Subscribers for a PIN on the LED	4-9
Specify the Minimum Number of Digits to Display for Channels on the Set-Top	4-10

Display the Time of Day or a Blank Screen When the Set-Top is Powered Off

Introduction

The Display: Power Off option allows subscribers to choose whether the set-top displays the time of day or a blank screen on the LED when the set-top is powered off. If you do not enable this option, you must select what the set-top displays when powered off.

Recommended Setting

Enable this option to allow subscribers to choose what is displayed on the front panel of the set-top when powered off.

Allowing Your Subscribers to Choose What the Set-Top Displays When Powered Off

To allow your subscribers to choose whether the set-top displays the time of day or a blank screen when powered off, complete the following steps.

Note: To force all subscribers to use the same display on the set-top when it is powered off, see **Selecting What the Set-Top Displays When Powered Off**, next in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.

2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.

5. Make sure the option for **Display: Power Off** is selected.

Result: When this field is selected, subscribers can select whether the LED displays the time of day or a blank screen when the set-top is powered off.

6. Click **Save**.

Result: The General Settings menu of the set-top will now display the options for displaying either the time of day or a blank screen when the set-top is powered off.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

Display the Time of Day or a Blank Screen When the Set-Top is Powered Off, Continued

8. Click **Staging Defaults**.

Result: The Set Up Staging Defaults window opens.

9. Select the **Base Application** tab.

Result: The Base Application tab appears in the forefront.

10. For the **Display Power Off** option, select one of the following settings for the set-top:
 - **Time when powered off.** The set-top displays the time when powered off.
 - **Blank when powered off.** The set-top displays a blank screen when powered off.

11. Click **Save**.

Result: All of your subscribers' set-tops will use the display you selected when powered off. Subscribers can use the General Settings menu to change the setting.

12. Click **Cancel**.

Result: The DHCT Configure prompt opens.

13. Click **File** and **Close** to close the DHCT Configure prompt.

Display the Time of Day or a Blank Screen When the Set-Top is Powered Off, Continued

Selecting What the Set-Top Displays When Powered Off

To select what the set-top displays when powered off, complete the following steps.

Note: To allow subscribers to select whether the set-top displays the time of day or a blank screen when powered off, see **Allowing Your Subscribers to Choose What the Set-Top Displays When Powered Off**, earlier in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.
5. Make sure the option for Display: Power Off is *not* selected.
Result: When this field is *not* selected, subscribers cannot choose what the LED on the set-top displays when powered off.
6. Select the **Base Application** tab to select what the set-top displays when powered off.
Result: The Base Application tab appears in the forefront.
7. For the **Display Power Off** option, select one of the following settings for the set-top:
 - **Time when powered off.** The set-top displays the time when powered off.
 - **Blank when powered off.** The set-top displays a blank screen when powered off.
8. Click **Save**.
Result: All of your subscribers' set-tops will use the display you selected when powered off.
9. Click **Cancel**.
Result: The DHCT Configure prompt opens.
10. Click **File** and **Close** to close the DHCT Configure prompt.

Display the Time of Day or Channel Number At Power On

Introduction

The LED Channel Switch option allows subscribers to choose whether the set-top displays the time of day or the channel number on the LED when the set-top is powered on. If you do not enable this option, you must select what the set-top displays when powered on.

Recommended Setting

Enable this option to allow subscribers to choose what is displayed on the front panel of the set-top when powered on.

Allowing Your Subscribers to Choose What the Set-Top Displays When Powered On

To allow your subscribers to choose whether the set-top displays the time of day or the channel number when powered on, complete the following steps.

Note: If you want to select what the set-top displays when powered on, see **Selecting What the Set-Top Displays When Powered On**, next in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.

5. Make sure the option for **LED Channel Switch** is selected.

Result: When this option is selected, subscribers can choose whether the set-top displays the time of day or the channel number when powered on.

6. Click **Save**.

Result: The General Settings menu of the set-top will now display the options for displaying either the time of day or the channel number on the LED of the set-top at power on.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

Display the Time of Day or Channel Number At Power On, Continued

8. Click **Staging Defaults**.

Result: The Set Up Staging Defaults window opens.

9. Select the **Base Application** tab.

Result: The Base Application tab appears in the forefront.

10. For the **LED Channel Switch** option, select one of the following settings for the set-top:

- **Always Time.** The set-top displays the current time when powered on.
- **Always channel.** The set-top displays the current channel when powered on.
- **Channel When Tuning.** The set-top displays the current channel when the subscriber changes the channel. After a few seconds, the set-top displays the current time.

11. Click **Save**.

Result: All of your subscribers' set-tops will use the display you selected when powered on. Subscribers can use the General Settings Menu to change the setting.

12. Click **Cancel**.

Result: The DHCT Configure prompt opens.

13. Click **File** and **Close** to close the DHCT Configure prompt.

Display the Time of Day or Channel Number At Power On, Continued

Selecting What the Set-Top Displays When Powered On

If you want to select what the set-top displays when powered on, complete the following steps.

Note: If you want to allow subscriber to select what the set-top displays when powered on, see **Allowing Your Subscribers to Choose What the Set-Top Displays When Powered On**, earlier in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.
5. Make sure the option for **LED Channel Switch** is *not* selected.
Result: When this field is *not* selected, subscribers cannot select what the set-top displays when powered on.
6. Select the **Base Application** tab to select what the LED on the set-top displays at power on.
Result: The Base Application tab appears in the forefront.
7. For the **LED Channel Switch** option, select one of the following settings for the set-top:
 - **Always Time.** The set-top displays the current time when powered on.
 - **Always Channel.** The set-top displays the current channel when powered on.
 - **Channel When Tuning.** The set-top displays the current channel when the subscriber changes the channel. After a few seconds, the set-top displays the current time.
8. Click **Save**.
Result: All of your subscribers' set-tops will use the display you selected when powered on.
9. Click **Cancel**.
Result: The DHCT Configure prompt opens.
10. Click **File** and **Close** to close the DHCT Configure prompt.

Prompt Subscribers for a PIN on the LED

Introduction

The Enable PIN on LEDs option allows you to display the message “PIN” on the LED on the set-top (for those that have LED displays) when a subscriber tunes to a channel that requires a PIN. This message prompts the subscriber to enter a PIN. If you do not enable this option, the LED on the set-top will display the channel number or the time of day when the PIN entry screen is displayed.

Recommended Setting

Disable this feature to cause the set-top to display the time of day or channel number on the LED as configured for this set-top.

Prompting Subscribers for a PIN on the LED of the Set-Top

To display the PIN message on the LED of the set-top when a subscriber tunes to a channel that requires a PIN, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **PIN Entry** tab.
Result: The PIN Entry tab appears in the forefront.
5. Do you want to prompt subscribers to enter a PIN by displaying a message on the LED?
 - If **yes**, make sure the option for **Enable PIN on LEDs** is selected.
Result: When this option is enabled, the LED on the set-top prompts subscribers for a PIN when they tune to a channel that requires a PIN.
 - If **no**, make sure the option for **Enable PIN on LEDs** is *not* selected.
Result: When the subscriber tunes to a channel that requires a PIN, the LED on the set-top will display either the time of day or the channel number. The LED displays the time of day or the channel number depending upon the setting for the LED Channel switch option. For more information on the LED Channel Switch option, see **Display the Time of Day or Channel Number at Power On**, earlier in this chapter.
6. Click **Save**.
Result: The set-top will respond as you specified in step 5.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Specify the Minimum Number of Digits to Display for Channels on the Set-Top

Introduction

The Number of LED Digits option allows you to specify the minimum number of digits to display for channels in the LED on the front panel of the set-top. This setting determines whether the set-top adds leading zeroes for channels that use less than the specified minimum number of LED digits. If the channel number is greater than this number of digits you enter, the LED shows the full channel number.

For example, if you enter 3 for this option, the LED displays a minimum of three numbers when you tune to a channel:

- Channel 12 will display 012
- Channel 456 will display 456
- Channel 1234 will display 1234

Specifying the Minimum Number of Digits to Display on the LED of the Set-Top for Channel Numbers

To specify the minimum number of digits to display on the LED of the set-top for channel numbers, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **Base Application** tab.
Result: The Base Application tab appears in the forefront.
5. In the **Number of LED Digits** field, enter the minimum number of digits to display on the LED of the set-top for channels. The values are 2, 3, and 4.
6. Click **Save**.
Result: The LED on the set-top will display the minimum number of digits for channels that you specified in step 5.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Chapter 5

High-Definition Options

Overview

Introduction

All broadcast HD services and PPV services that carry HD content should be identified as HD. Adding the ;HD behavior tag to the application URL causes non-HD set-tops to display a barker that alerts the subscriber that the service is in HD. The HD behavior tag also causes HD and HD PPV services to operate correctly on a 3100HD. If you do not add the HD behavior tag to an HD service, the subscriber can get a black screen. This chapter provides instructions for modifying the application URL with an ;HD behavior tag to avoid any abnormal behavior with broadcast HD or PPV/IPPV services.

In This Chapter

This chapter contains the following topics.

Topic	See Page
Add the HD Behavior Tag to HD and HD PPV Services	5-2

Add the HD Behavior Tag to HD and HD PPV Services

Adding the HD Behavior Tag to the Application URL

Follow these instructions to add the ;HD behavior tag to the application URL for any broadcast services that are carried in HD and for PPV services that carry HD content.

1. On the DNCS Administrative Console, click the **Application Interface Modules** tab.
2. Click **SAM Service**.

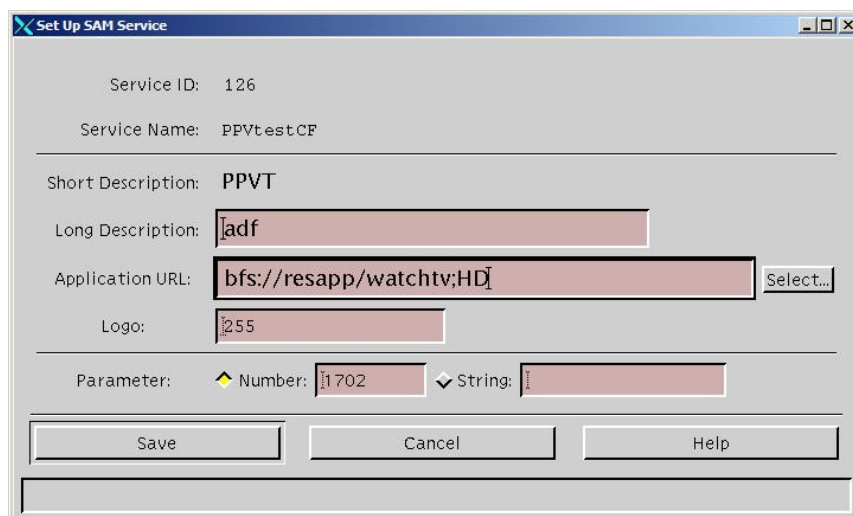
Result: The SAM Service List window opens.

3. Does a SAM service already exist that you want to use?
 - If **yes**, go to step 4.
 - If **no**, select **File** and then **New** to create a new SAM service. Go to step 5.

Note: The application URL for PPV services cannot be edited from the SAM Service list. To add the ;HD behavior tag to a PPV service, you must modify the event use SAM service identified on the PPV Service Setup screen.

4. Double-click on the SAM service that you want to reconfigure to include the ;HD parameter.

Result: The Set Up SAM Service window opens.



The image shows a 'Set Up SAM Service' dialog box with the following fields and values:

- Service ID: 126
- Service Name: PPVtestCF
- Short Description: PPVT
- Long Description: jadf
- Application URL: bfs://resapp/watchtv;HD (with a 'Select...' button to the right)
- Logo: 255
- Parameter: Number: 1702, String: (empty)

At the bottom are three buttons: Save, Cancel, and Help.

Add the HD Behavior Tag to HD and HD PPV Services, Continued

5. To add the ;HD parameter, update the current entry that appears in the **Application URL** field or type the URL to resemble the following:
bfs://resapp/watchtv;HD

Note: If you previously created a URL with the ;HD behavior tag, click **Select** to choose it from the list of predefined URLs.

6. Click **Save**.

Results:

- The system saves the service information in the DNCS database and closes the Set Up SAM Service window.
 - The SAM Service List window updates to include the new service with its system-assigned service ID and application URL behavior tag.
7. Repeat steps 1 through 6 for every HD or PPV/IPPV service that you want to reconfigure to include the ;HD behavior tag.

Note: Based on the DNCS software version you are using, allow up to 10 minutes for the change to the SAM URL to be implemented.

Chapter 6

Interactive Program Guide Options

Overview

Introduction

The Interactive Program Guide is Cisco's name for the on-screen program guide provided by the Explorer set-top.

This chapter provides step-by-step instructions for configuring the Interactive Program Guide to best suit your subscribers' needs.

Important:

- The procedures in this chapter cover a global configuration. When you send a global configuration, *all* set-tops in your system are affected.
- If you want to send a configuration to all the set-tops in a hub, see **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1.
- If you want to change a setting for only one set-top, see **Send a Configuration to a Single Set-Top** in Chapter 1.
- If you want to set the Staging Defaults, see **Set Staging Defaults** in Chapter 1.

Overview, Continued

In This Chapter

This chapter contains the following topics.

Topic	See Page
Show the C Button on the Interactive Program Guide	6-3
Show the Current Channel Number, Date, and Time on the Interactive Program Guide	6-5
Display Quick Settings or General Settings from the Interactive Program Guide	6-6
Show a PPV Icon for PPV Programs in the Interactive Program Guide	6-7
Show the Interactive Program Guide by Time, Theme, or Title	6-8
Sort Programs in the Guide by Time, Theme, or Title With the Browse By Menu	6-9
Specify When the Interactive Program Guide Scrolls to the Next Half-Hour Slot for Each Half-Hour Period	6-10
Specify How the Numeric Keys Respond on the Interactive Program Guide	6-11
Adjust How Set-Tops Use IPG Memory	6-13
Authorize the Interactive Program Guide for Viewing	6-17

Show the C Button on the Interactive Program Guide

Introduction

The Show C Button option allows you to specify whether the C button is displayed on the Interactive Program Guide. If you choose to show the C button on the Interactive Program Guide (IPG), you can also specify which of the following items appear on the Interactive Program Guide screen:

- **No Icon or Label** means that the C button appears on the Interactive Program Guide without a return icon or a text label.
- **Icon** means that the return icon appears beside the C button on the Interactive Program Guide.
- **Label** means that you can choose what appears beside the C button on the Interactive Program Guide. You can choose among Base, Home, Jump, and Left as the labels.

When subscribers press the C key on their remote control, they are taken to the program information for the program they are currently watching. If you do not enable this option, the C button does not appear on the Interactive Program Guide, but the C key on the remote control will still function.

Note: The IPG scroll option determines which program is displayed when the subscriber presses the C key. For more information, see **Specify When the Interactive Program Guide Scrolls to the Next Half-Hour Slot for Each Half-Hour Period**, later in this chapter.

Recommended Setting

Enable this option to show the C button on the Interactive Program Guide with an icon. We recommend that you use the Return icon.

Showing the C Button on the Interactive Program Guide

To show the C button on the Interactive Program Guide, complete the following steps.

If you do not want to show the C button on the Interactive Program Guide, see **Disabling the C Button on the Interactive Program Guide**, next in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.

Show the C Button on the Interactive Program Guide, Continued

4. Select the **IPG** tab.
Result: The IPG tab appears in the forefront.
5. Do you want to show the C button on the Interactive Program Guide?
 - If **yes**, for the **Show C button** option, select **Yes** to display the C button on the Interactive Program Guide. The system displays options for you to select what you want to appear beside the C button on the Interactive Program Guide. Go to step 6.
 - If **no**, for the **Show C button** option, select **No** to prevent the C button from appearing on the Interactive Program Guide but the C key on the remote control will still function. Go to step 7.
6. Choose one of the following items to appear on the Interactive Program Guide beside the C button:
 - **No Icon or Label** means that the C button appears on the Interactive Program Guide without a return icon or a text label.
 - **Icon** means that the return icon appears beside the C button on the Interactive Program Guide.
 - **Label** means that you can choose a label from a list. The label you choose appears beside the C button on the Interactive Program Guide.
7. Click **Save**.
Result: The Interactive Program Guide responds as you specified in step 5.
8. Click **Cancel**.
Result: The DHCT Configure prompt opens.
9. Click **File** and **Close** to close the DHCT Configure prompt.

Show the Current Channel Number, Date, and Time on the Interactive Program Guide

Introduction

The Show Tuned Channel Banner option lets you specify whether the current channel number, date, and time appear in the upper right corner of the Interactive Program Guide. The channel banner is displayed right below the live video feed. If you do not enable this option, the channel banner will not appear on the Interactive Program Guide.

Recommended Setting

Enable this option to show the “Where am I” banner on the Interactive Program Guide.

Important: Only use the “Where am I” banner if you have Channel Changing Enabled for the Scaled Video. See **Allow Subscribers to Change Channels for the Scaled Video**, in chapter 8.

Showing the Channel Banner on the Interactive Program Guide

To show the channel banner on the Interactive Program Guide, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **IPG** tab.
Result: The IPG tab appears in the forefront.
5. Do you want to show the channel banner on the Interactive Program Guide?
 - If **yes**, be sure the **Show Tuned Channel Banner** option is selected. The channel banner will appear in the upper right corner of the Interactive Program Guide below the live video feed.
 - If **no**, be sure the **Show Tuned Channel Banner** option is *not* selected.
6. Click **Save**.
Result: The Interactive Program Guide will respond as you specified in step 5.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Display Quick Settings or General Settings from the Interactive Program Guide

Introduction

The SETTINGS Key from IPG option allows you to display either the Quick Settings menu or the General Settings menu from the Interactive Program Guide. When subscribers are watching TV, pressing the SETTINGS key once displays the Quick Settings menu and pressing the SETTINGS key twice displays the General Settings menu. You may want to maintain this same behavior from the Interactive Program Guide to avoid confusing your subscribers.

Recommended Setting

Display the Quick Settings menu from the Interactive Program Guide.

Displaying Quick Settings or General Settings From the Interactive Program Guide

To display either the Quick Settings menu or the General Settings menu from the Interactive Program Guide, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **Misc Settings** tab.
Result: The Misc Settings tab appears in the forefront.
5. For the **SETTINGS Key from IPG** option, choose one of the following settings:
 - **General Settings** – If enabled, subscribers can view the General Settings menu from the Interactive Program Guide by pressing the SETTINGS key on the remote control. The subscriber can press the SETTINGS key again to return to watching TV.
 - **Quick Settings** – If enabled, subscribers can view the Quick Settings menu from the Interactive Program Guide by pressing the SETTINGS key on the remote control. The subscriber can press the SETTINGS key again to display the General Settings menu.
6. Click **Save**.
Result: The SETTINGS key will function on the Interactive Program Guide as you specified in step 5.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Show a PPV Icon for PPV Programs in the Interactive Program Guide

Introduction

The Show PPV Icon option allows you to show a PPV icon for channels in the Interactive Program Guide that offer PPV programming. The icon appears in the upper left corner next to the program description.

Recommended Setting

Enable this option to show the PPV icon on the Interactive Program Guide.

Showing the PPV Icon in the Interactive Program Guide

To show the PPV icon for PPV programs in the Interactive Program Guide, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.

2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **IPPV** tab.

Result: The IPPV tab appears in the forefront.

5. Do you want to show a PPV icon for PPV programs in the Interactive Program Guide?

- If **yes**, be sure the option for **Show PPV icon** is selected.
- If **no**, be sure the option for **Show PPV icon** is *not* selected.

6. Click **Save**.

Result: If you selected yes in step 5, a yellow icon will appear for channels in the Interactive Program Guide that offer PPV programming.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Show the Interactive Program Guide by Time, Theme, or Title

Introduction

The Browse by option allows you to specify how the Interactive Program Guide shows the program data the first time the subscriber accesses the guide. The Interactive Program Guide can show the data by time, theme, or title.

Recommended Setting

Show the data by time.

Showing the Interactive Program Guide by Time, Theme, or Title

To show the data for the Interactive Program Guide by time, theme, or title, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.

2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **IPG** tab.

Result: The IPG tab appears in the forefront.

5. For the **Browse by** field, select one of the following options:

- **Time.** The Interactive Program Guide sorts the programs by time.
- **Theme.** The Interactive Program Guide sorts the programs by theme.
- **Title.** The Interactive Program Guide sorts the programs by title

6. Click **Save**.

Result: The Interactive Program Guide will display the data as you specified in step 5.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Sort Programs in the Guide by Time, Theme, or Title With the Browse By Menu

Introduction

The Display “Browse by” menu option lets you specify whether the Browse by menu automatically appears when the subscriber tunes to the Interactive Program Guide. The Browse by menu allows subscribers to sort programs in the Interactive Program Guide by time, theme, or title. If you do not enable this option, the subscriber must press the A key to display the Browse by menu.

Recommended Setting

Enable this option to display the Browse by menu on the Interactive Program Guide.

Automatically Displaying the Browse By Menu When the Subscriber Accesses the Interactive Program Guide

To automatically display the Browse by menu when the subscriber tunes to the Interactive Program Guide, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **IPG** tab.
Result: The IPG tab appears in the forefront.
5. Do you want to automatically display the Browse by menu when the subscriber tunes to the Interactive Program Guide?
 - If **yes**, be sure the option for **Display “Browse by” menu** is selected.
 - If **no**, be sure the option for **Display “Browse by” menu** is *not* selected. The subscriber must press the A key on the remote control to activate the Browse by menu.
6. Click **Save**.
Result: The Interactive Program Guide will display the Browse by menu as you specified in step 5.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Specify When the Interactive Program Guide Scrolls to the Next Half-Hour Slot for Each Half-Hour Period

Introduction

The IPG scrolls option lets you specify how soon before each half-hour period that the Interactive Program Guide scrolls to the next half-hour slot.

Recommended Setting

Set the scrolling to 10 minutes.

Specifying When the Interactive Program Guide Scrolls to the Next Half-Hour Slot

To specify how soon before each half-hour period that the Interactive Program Guide scrolls to the next half-hour slot, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **IPG** tab.

Result: The IPG tab appears in the forefront.

5. For the IPG scrolls field, enter the number of minutes before the half-hour period that the Interactive Program Guide scrolls to the next half-hour slot. The values are 0 through 30.

Example: If you set the scroll to 0, the guide will scroll at every half hour. If you set the scroll to 5 minutes, the guide will scroll 5 minutes before the next half hour slot. In this example, the guide will scroll at 11:30 or 11:25, respectively.

6. Click **Save**.

Result: The Interactive Program Guide will scroll to the next half-hour slot in the number of minutes you specified in step 5.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Specify How the Numeric Keys Respond on the Interactive Program Guide

Introduction

The Numeric Key Response option lets you specify what happens when a subscriber presses a numeric key on the remote control while the Interactive Program Guide is displayed.

How Do the Numeric Keys Respond?

When the subscriber presses the numeric keys on the remote control while the Interactive Program Guide is displayed, the keys can respond as follows:

- The guide disappears and tunes to the current channel.
- The guide changes to Time View (if not already in Time View) and highlights the channel selected. For example, suppose the guide is in Title View. If the subscriber presses 2 and 7 on the remote control, the Interactive Program Guide switches to Time View and highlights the programming for channel 27.

Notes:

- If subscribers do not enter the full channel number, they must press Select to tune to the channel. For more information, see **Specify the Minimum Number of Digits Required to Change Channels on the Set-Top** in Chapter 3.
- If the system is configured to support channel changing for the scaled video and the Numeric Key Response option is set to Time View, pressing a numeric key causes the scaled video to change to the channel number you entered. For more information, see **Allow Subscribers to Change Channels for the Scaled Video**, later in this guide.

Recommended Setting

Select the **Switch to Time View, highlight channel** option. When subscribers press a numeric key, the guide changes to Time View (if not already in Time View) and highlights the channel that was entered.

Specifying How the Numeric Keys Respond on the Interactive Program Guide

To specify how the numeric keys respond on the Interactive Program Guide, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **IPG** tab.
Result: The IPG tab appears in the forefront.

Specify How the Numeric Keys Respond on the Interactive Program Guide, Continued

5. For the **Numeric Key Response** field, select one of the following options:
 - **Exit IPG, tune to channel.** When subscribers press a numeric key on the remote control, the guide disappears and tunes to the current channel.
 - **Switch to Time View, highlight channel.** When subscribers press a numeric key on the remote control, the guide changes to Time View (if not already in Time View) and highlights the channel that was entered.
6. Click **Save**.

Result: When subscribers press a numeric key on the remote control while the program guide is displayed, the guide will respond as you specified in step 5.
7. Click **Cancel**.

Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Adjust How Set-Tops Use IPG Memory

Introduction

This section describes IPG Memory Usage settings that allow you to adjust how the set-top uses IPG memory. These adjustments can be made on a site basis (or for testing purposes, may be made on a hub basis). Adjusting these settings may enable you to maximize memory usage, particularly on older, lower-memory set-tops, such as Explorer 2000 set-tops. For detailed instructions on setting the IPG memory usage settings, refer to the *SARA Application Server 3.4.1 User's Guide*.

Enhance Memory Allocation

You can enhance how the set-top uses IPG memory in three ways:

- Configure the amount of memory the IPG must leave free
- Configure Memory Thresholds
- Choose If or When the IPG Data Is Purged

We recommend that you keep the IPG memory usage variables at the default values. If you want to adjust how the set-top uses IPG memory, call Cisco Broadband Services for assistance.

Configure the Amount of Memory the IPG Must Leave Free

To allow for more memory for other applications, SARA has been modified so that you can specify the amount of memory the IPG leave free for other applications. The set-top loads the Interactive Program Guide data in a progressive manner. Day 1 and Day 2 of the grid data are loaded first. Then the set-top loads Day 1 and Day 2 long descriptions. The set-top will then load the grid data for future dates depending upon how much memory is available. The set-top will stop loading after there is less than 512 KB of contiguous free memory or less than 750 KB total free memory. The remaining unused memory is available for applications and operating system use. Whenever more memory is needed by another application, the existing behavior for the IPG daemon in the set-top is to release memory. The memory is released by dropping IPG data while attempting to keep Day 1 and Day 2 of grid information available.

Note: If you are not using Application Server 3.4.1, you cannot adjust how the set-top uses IPG memory.

Adjust How Set-Tops Use IPG Memory, Continued

Configure Memory Thresholds

SARA currently limits the amount of free memory that IPG data can consume. With Application Server 3.4.1 and this new release of client code, the memory threshold is now configurable by setting the following values:

- **Leave Largest Contiguous Free KB.** The value in this field indicates, in kilobytes, the minimum amount of contiguous free memory ("largest contiguous free block") that the IPG daemon in the set-tops must see available in order to download IPG files.

Note: The valid range is from 50 KB to 65535 KB.

Recommended/Default setting: 512 KB

- **Additional Total Free in Excess of Largest Contiguous KB.** The value in this field indicates, in kilobytes, the minimum amount of additional free memory above and beyond the largest contiguous block that the IPG daemon in the set-tops must see available in order to download IPG files. For example, if Leave Largest Contiguous Free KB is set to 512 and Additional Total Free in Excess of Largest Contiguous KB is set to 256, then there must be at least 768 KB of total free memory.

Note: The valid range is from 0 KB to 65535 KB.

Recommended/Default setting: 256 KB

Use Fixed Size Grid File Data Allocations KB. The value in this field indicates for SARA to pre-allocate the amount of memory that is configured. This size must be at least 10 percent more than the largest IPG file that currently exists on the system. The size must be larger in order to guarantee room for new data as time progresses. This option actually uses more memory than if the option were not being used because of the inclusion of the 10 percent buffer. However, using this option guarantees that at each midnight, the new data coming in will fit into the existing allocations without having to release and reallocate memory. SARA just reuses the exact same memory previously occupied by the day that has expired at midnight. This behavior has the potential to reduce memory fragmentation that could otherwise cause the IPG allocation request to fail and thus not load data in set-tops that are tight on memory. In this configuration there should be no problem fitting the new data into memory for the new day.

Adjust How Set-Tops Use IPG Memory, Continued

The values for this option are:

- **0 (Disabled)** - A zero in this field indicates that this setting is disabled.

Note: Disabled is the recommended/default setting.

- **A Numeric Value (Enabled)** - When you enter a numeric value in this field, the Application Server looks at the existing IPG files and restricts you to using a value that is 10 percent larger than your current largest file. The system calculates the minimum value that you can enter in this field based on the largest IPG file in your system. When you enter a value in this field, the system displays a minimum fixed size as follows.:
 - If you enter a value that is too low, a red box is displayed with the minimum fixed size.
 - If you enter a value that is appropriate, a green box is displayed with the minimum fixed size.
 - If you enter a value is too high, a yellow box is displayed with the minimum fixed size.

Important: When using this setting, Cico recommends that each week you type a value in this field to let the system calculate the minimum fixed size for your system.

Adjust How Set-Tops Use IPG Memory, Continued

Choose If or When the IPG Data Is Purged

A site can now choose how the data for the current day and next day's data are purged, if at all. The current day grid data includes the program schedule (titles and show times) for the current day. The next day grid data includes the program schedule for the next day. The current day and next day description includes detailed information about each program for the day.

For the current day and next day, you can select one of the following purge behaviors:

- **Never Purge** – The data is never purged
- **Purge Only When Asked by Another App** – The data is not purged unless another application requests SARA to minimize its memory usage
- **Automatic Priority-Based Purging** – The data is automatically purged anytime a request comes in from SARA, the operating system, drivers, or any application when memory is otherwise not available. This setting affects the current and next day if so configured. (Future days – days 3 and beyond – are always set to automatically purge.) When purged, the lowest priority data (future days) is purged first to free up memory for the requestor, followed by "next" day, and then "current" day, if needed and if configured to do so.

Note: Data for days in the past are always purged at midnight, when the day expires, regardless of this setting.

The recommended/default values are as follows:

- **Current Day Grid** – Never Purge
- **Current Day Description** – Purge Only When Asked by Another App
- **Next Day Grid** – Never Purge
- **Next Day Description** – Automatic Priority-Based Purging

Authorize the Interactive Program Guide for Viewing

Introduction

The Allow IPG Authorization By Package option lets you specify whether the Interactive Program Guide can be viewed by all subscribers. If you enable this option, then set-tops must be authorized for a specific package to have access to the Interactive Program Guide. If you do not enable this option, then all subscribers can view the Interactive Program Guide.

Important: If you select this field, you must enter the name of the package that is required to authorize the set-top. You must have a package set up on the DNCS and in your billing system for IPG authorization.

Recommended Setting

Disable this option if you do not charge for the Interactive Program Guide. If this feature is disabled, no package is required to authorize the guide, and all subscribers can view it.

Create a Package

To authorize the Interactive Program Guide, you must use an existing package or create a package. To create a package, refer to the online Help on the DNCS for instructions.

Authorizing the Interactive Program Guide

You can authorize the program guide so that all subscribers can access the guide, or you can require a package to authorize the guide for the set-top.

To authorize the Interactive Program Guide, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **Base Application** tab to require a package to authorize the Interactive Program Guide.
Result: The Base Application tab appears in the forefront.
5. Do you want to authorize the Interactive Program Guide by package?
 - If **yes**, be sure the option for **Allow IPG Authorization by Package** is selected. The system will prompt you for the name of the package that is required to authorize the Interactive Program Guide. Go to step 6.
 - If **no**, be sure the option for **Allow IPG Authorization by Package** is *not* selected. All of your subscribers will be authorized to view the Interactive Program Guide. Go to step 7.

Authorize the Interactive Program Guide for Viewing, Continued

6. From the **Package Name** field, select the package that is required to authorize the Interactive Program Guide.
7. Click **Save**.
Result: The Interactive Program Guide will be authorized as you specified in step 5.
8. Click **Cancel**.
The DHCT Configure prompt opens.
9. Click **File** and **Close** to close the DHCT Configure prompt.

Chapter 7

Logo Options

Overview

Introduction

Prominently displaying logos allows you to brand your service offerings. An IPG logo appears on either the top left or right of the Interactive Program Guide. This chapter provides information that you need to position the IPG logo on the Interactive Program Guide.

Related Documents

For detailed instructions on adding MSO logos or other custom logos to your environment, refer to the following documents:

- *LogoTool Software User's Guide*
- *Configuring Logos on the DNCS*

In This Chapter

This chapter contains the following topic.

Topic	See Page
Position the IPG Logo on the Interactive Program Guide	7-2

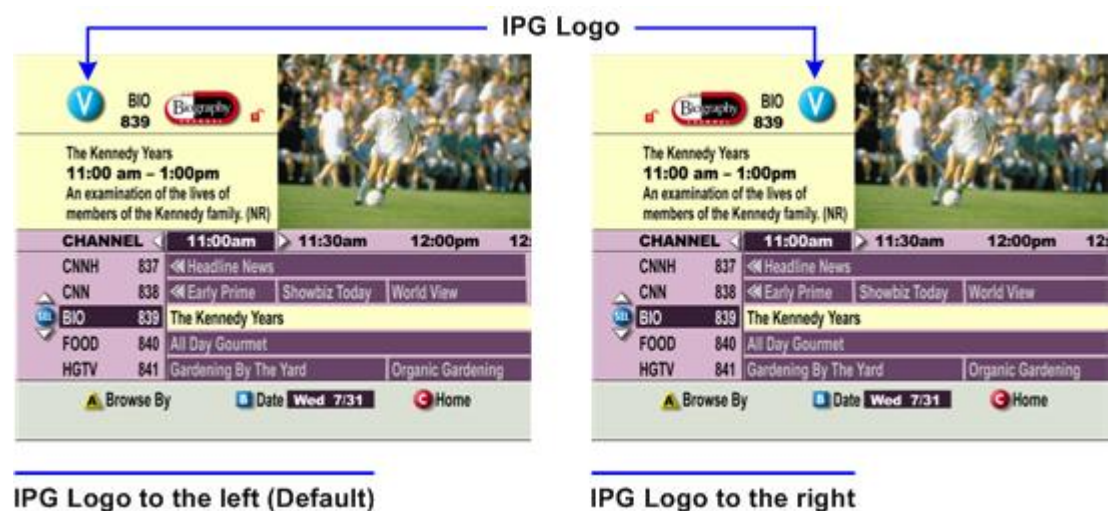
Position the IPG Logo on the Interactive Program Guide

Introduction

Each time your subscribers use the Interactive Program Guide, the IPG logo that you have configured is displayed on the guide. The MSO Logo Position option lets you choose to display the logo either to the left or right of the channel number. The default position for the IPG logo is on the *left* side of the channel number. If you want to keep the logo on the left, no additional steps are required. If you want to move the logo to the right side of the channel number, see **Positioning the Logo on the Interactive Program Guide**, later in this section.

Logo Positions

The following screens show an example of the logo positions.



Positioning the IPG Logo on the Interactive Program Guide

To position the IPG logo on the Interactive Program Guide, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **IPG** tab.
Result: The IPG tab appears in the forefront.

Position the IPG Logo on the Interactive Program Guide, Continued

5. For the **MSO Logo Position** option, select either the Left or Right option.

6. Click **Save**.

Result: The logo change should appear within 5 minutes. You must exit and then re-enter the Interactive Program Guide to see the change.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Chapter 8

Look, Feel, and Navigation Options

Overview

Introduction

This chapter provides step-by-step instructions for configuring the look, feel, and navigation of SARA to best suit your subscribers' needs.

Important:

- The procedures in the following chapters cover a global configuration. When you send a global configuration, *all* set-tops in your system are affected.
- If you want to send a configuration to all the set-tops in a hub, see **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1.
- If you want to change a setting for only one set-top, see **Send a Configuration to a Single Set-Top** in Chapter 1.
- If you want to set the Staging Defaults, see **Set Staging Defaults** in Chapter 1.

In This Chapter

This chapter contains the following topics.

Topic	See Page
Choose a Color Scheme for SARA Screens	8-2
Use the Numeric Keys on the Remote Control for the General Settings Menu	8-5
Select the Language that Appears on SARA Screens	8-6
Allow Subscribers to Change Channels for the Scaled Video	8-9

Choose a Color Scheme for SARA Screens

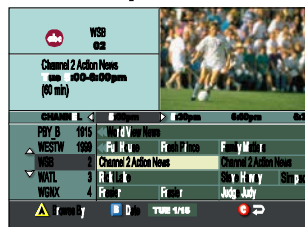
Introduction

The Set: Color Scheme option allows the subscriber to choose a color scheme for SARA screens. If you do not enable this option, you can select the color scheme for SARA for all of your subscribers. The choice that you make for SARA screens also affects third-party applications that are designed to support multiple color schemes.

Color Choices

The following color choices are available for SARA. You must view this document online or print this page on a color printer to see the color choices.

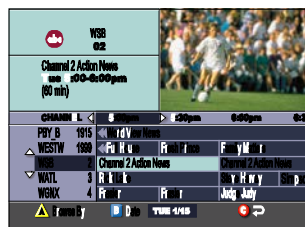
Aquarium



Ballpark



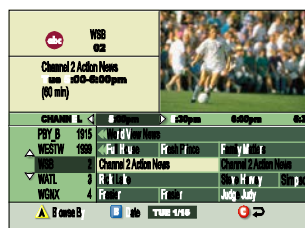
Boardwalk



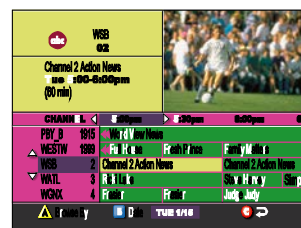
Campground



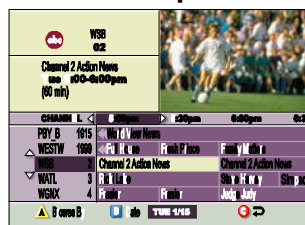
Golf Course



Roller Rink



Town Square



T10705

Note: Because of different settings on computers and TVs and in print, the colors may vary slightly from machine to machine.

Choose a Color Scheme for SARA Screens, Continued

Recommended Setting

Enable this option to allow subscribers to choose the color scheme for SARA.

Allowing Subscribers to Choose the Color Scheme for SARA

To allow subscribers to choose the color scheme for SARA, complete the following steps.

Note: If you want to choose the color scheme for SARA for all of your subscribers, see **Choosing the Color Scheme for SARA for Your Subscribers**, next in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.
5. Make sure the option for **Set: Color Scheme** is selected.
Result: When this option is selected, subscribers can choose the color scheme for SARA from the General Settings menu on the set-top.
6. Click **Save**.
Result: The color scheme options for SARA now appear in the General Settings menu. Subscribers can use these options to select the color scheme for SARA.
7. Click **Cancel**.
Result: The DHCT Configure Prompt window appears.
8. Click **Staging Defaults**.
Result: The Set Up Staging Defaults window opens.
9. Select the **Base Application** tab to select the color scheme for SARA.
Result: The Base Application tab appears in the forefront.
10. For the **Color Scheme** option, select the color that you want all your subscribers to use for SARA.

Choose a Color Scheme for SARA Screens, Continued

11. Click **Save**.

Result: All of your subscribers will now use the same color scheme for SARA. Subscribers can use the General Settings menu to change the color scheme.

12. Click **Cancel**.

Result: The DHCT Configure prompt opens.

13. Click **File** and **Close** to close the DHCT Configure prompt.

Choosing the Color Scheme for SARA for Your Subscribers

To choose the color scheme for SARA for all of your subscribers, complete the following steps.

Note: If you want your subscribers to choose the color scheme for SARA, see **Allowing Subscribers to Choose the Color Scheme for SARA**, earlier in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.

5. Make sure the **Set: Color Scheme** option is *not* selected.

Result: When this option is *not* selected, subscribers cannot change the color scheme for SARA. Instead, you can select the color scheme for the subscriber.

6. Select the **Base Application** tab to select the color scheme for all subscribers.

Result: The Base Application tab appears in the forefront.

7. For the **Color Scheme** option, select the color that you want all your subscribers to use for SARA.

8. Click **Save**.

Result: All of your subscribers will now use the same color scheme for SARA.

Use the Numeric Keys on the Remote Control for the General Settings Menu

Introduction

The Numeric Key Chooses Channel option allows the subscriber to use the numeric keys on the remote control to set values on the General Settings menu. If this feature is disabled, the numeric keys are disabled on the General Settings menu. The subscriber must press the UP or DOWN Arrow key or the PAGE + and PAGE - key to set values on the General Settings menu.

Important: If you enable this feature, we recommend that you also enable the **Numeric Key Sets Time** option.

Recommended Setting

Enable this option to allow subscribers to use the numeric keys to set values on the General Settings menu.

Using the Numeric Keys on the Remote Control for the General Settings Menu

To use the numeric keys on the remote control to set values on the General Settings menu, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.
5. Do you want your subscribers to use the numeric keys on the remote control to set values on the General Settings menu?
 - If **yes**, be sure the option for **Numeric Key Chooses Channel** is selected.
 - If **no**, be sure the option for **Numeric Key Chooses Channel** is *not* selected. Use the UP or DOWN Arrow key or the PAGE + and PAGE - key to set General Settings values.
6. Click **Save**.
Result: The keys on the remote will respond as you specified in step 5.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Select the Language that Appears on SARA Screens

Introduction

The Language: Screen option lets you specify whether subscribers can select the language for text that appears on the SARA screens, such as the General Settings menu, the Interactive Program Guide, barkers, and the Help screens for the set-top (accessed by pressing Info on the remote). If no translation is provided for the Help screens, the language will default to English. If you do not enable this option, you must select the language that appears on SARA screens for all of your subscribers.

Note: This option does not affect virtual channels and other screens that are not part of SARA.

Language Choices

The following languages are available to use for the screens:

- English
- French
- Spanish

Recommended Setting

Enable this option to allow subscribers to select the screen language.

Allowing Your Subscribers to Choose the Language for Screens

To allow your subscribers to choose the language that appears on the screens for the Interactive Program Guide and for barkers, complete the following steps.

Note: To force all of your subscribers to use the same language for screens and the Interactive Program Guide, see **Choosing the Screen Language for Your Subscribers**, next in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.

5. Make sure the option for **Language: Screen** is selected.

Result: When this option is selected, subscribers can choose the screen language for the SARA screens.

6. Click **Save**.

Result: The language options for the SARA screens now appear in the General Settings menu.

Select the Language that Appears on SARA Screens, Continued

7. Click **Cancel**.

Result: The DHCT Configure Prompt window appears.

8. Click **Staging Defaults**.

Result: The Set Up Staging Defaults window opens.

9. Click the **Base Application** tab.

10. For the **Screen Language** option, select the language that you want all your subscribers to use.

11. Click **Save**.

Result: All of your subscribers' set-tops will now use the screen language that you selected. Subscribers can use the General Settings Menu to change the screen language.

12. Click **Cancel**.

Result: The DHCT Configure prompt opens.

13. Click **File** and **Close** to close the DHCT Configure prompt.

Select the Language that Appears on SARA Screens, Continued

Choosing the Screen Language for Your Subscribers

To choose the screen language for all of your subscribers, complete the following steps.

Note: If you want to allow your subscribers to choose the language that appears on the SARA screens, see **Allowing Your Subscribers to Choose the Language for Screens**, earlier in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.

2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.

5. Make sure the **Language: Screen** option is *not* selected.

Result: When this option is *not* selected, subscribers cannot choose the screen language. Instead, you can select the screen language for the subscriber.

6. Select the **Base Application** tab to select the screen language for all subscribers.

Result: The Base Application tab appears in the forefront.

7. For the **Screen Language** option, select the screen language that you want all your subscribers to use for the SARA screens.

8. Click **Save**.

Result: All of your subscribers will now use the same screen language for the SARA screens and for barkers.

9. Click **Cancel**.

Result: The DHCT Configure prompt opens.

10. Click **File** and **Close** to close the DHCT Configure prompt.

Allow Subscribers to Change Channels for the Scaled Video

Introduction

This section explains how to enable channel changing for the scaled video (or quarter screen video). As an example, when a subscriber accesses the Interactive Program Guide, the current channel the subscriber is watching appears in the top, right quarter of the screen. The subscriber can continue watching the current channel in the scaled video as they browse through the Interactive Program Guide.

When the subscriber presses the channel up or down key (CH+ or CH-) on the remote control while in the Interactive Program Guide, the response depends upon whether channel changing is enabled for the scaled video as described below:

- If you enable channel changing for the scaled video, subscribers can channel up or down in the scaled video to preview different channels before going to a channel in full-screen view. If the subscriber exits the Interactive Program Guide without selecting a channel, the channel last shown in the scaled video opens in full-screen view.
- If you do **not** enable channel changing for the scaled video and the subscriber presses channel up or channel down, the system exits the Interactive Program Guide and tunes to the previous or next channel in full-screen view.

Note: If the system is configured to support channel changing for the scaled video and the Numeric Key Response option is set to Time View, pressing a numeric key causes scaled video to change to the channel number you entered.

To offer this functionality, you must do the following:

- If you want to offer this service to all subscribers, take these steps:
 1. Create a SAM service to enable channel changing for the scaled video.
 2. Verify that the service is functional.
- If you want to authorize a specific set of set-tops for channel changing for the scaled video, take these steps:
 1. Define a package for channel changing for the scaled video.
 2. Determine the EID for the package.
 3. Create a SAM service for channel changing for the scaled video using the EID as part of the application URL.
 4. Authorize the set-top for the package.
 5. Verify that the service is functional.

You can enable channel changing for the scaled video by completing the procedures in this section.

Allow Subscribers to Change Channels for the Scaled Video, Continued

Before You Begin

Before you enable channel changing for the scaled video, consider how this change in functionality affects all applications that use scaled video. Also consider how your subscribers will adjust to this change.

Creating a SAM Service for Channel Changing for the Scaled Video

The Service Application Manager (SAM) associates a service with attributes that define how the service operates and then passes this information to the set-tops. Creating the _QTR SAM service allows subscribers to change channels for the scaled video.

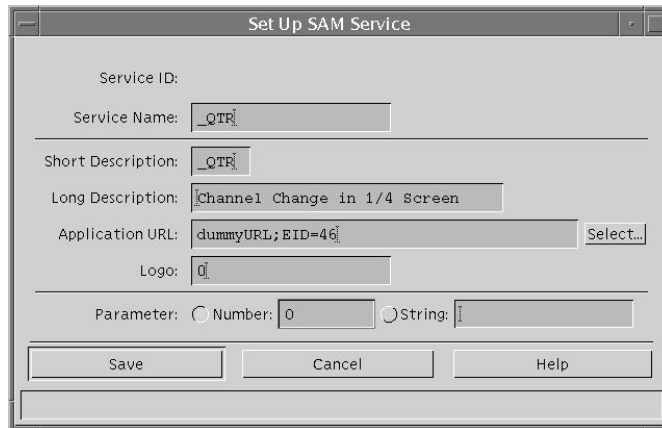
Complete these steps to create a SAM Service that will enable channel changing for the scaled video.

1. From the DNCS Administrative Console, click the **Application Interface Modules** tab.
2. Click SAM Service.
Result: The SAM Service List window opens.
3. Select **File** and choose **New**.
Result: The Set Up SAM Service window opens.
4. In the **Service Name** field, type **_QTR**.
5. Type the appropriate names in the Short Description and Long Description fields as follows:
 - Short Description – Type **_QTR**.
 - Long Description – Type **Channel Change in 1/4 screen**.**Important:** You must enter **_QTR** for both the Service Name and the Short Description for channel changing for the scaled video to work.
6. Do you want to offer this service to *all* subscribers?
 - If **yes**, in the Application URL field, type the following:
dummyURL
 - If **no**, in the Application URL field, type the following:
dummyURL;EID=#
Note: To target a specific set of set-tops, replace the # symbol with the *decimal* equivalent of the EID number for the package being used to activate this feature.
7. Type **0** (zero) in the Logo field.

Allow Subscribers to Change Channels for the Scaled Video, Continued

8. In the Parameter row, click Number and type 0 (zero).

Example: The Set Up SAM Service window resembles the following example.



9. Click **Save**.
10. On the SAM Service List window, select **File** and choose **Close**.

Result: Channel changing will be enabled after the SAM tables on the BFS are updated and the set-top can read them. The time varies based on the configuration of your system. The default time is 10 minutes.

Note: Set-tops must be off for at least 2 minutes before the SAM table changes are processed, or they must be left on overnight.

Chapter 9

Music Channel Options

Overview

Introduction

Why listen to the radio, when your cable service provider offers 24 hours of commercial-free music that is crystal clear, digital, and CD-quality sound? Cable subscribers enjoy their music channels, and more tune in each day.

This chapter provides the options that you can set for services that carry audio using the music application.

Important:

- The procedures in the following chapters cover a global configuration. When you send a global configuration, *all* set-tops in your system are affected.
- If you want to send a configuration to all the set-tops in a hub, see **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1.

In This Chapter

This chapter contains the following topics.

Topic	See Page
Choose a Screen Saver for Music Channels	9-2
Display Title, Track, Artist Information, and Promotional Text for Music Channels	9-4

Choose a Screen Saver for Music Channels

Introduction

The Music Screen Saver option lets you specify the screen saver that will appear on music channels when the subscriber does not touch the set-top or the remote control for 5 minutes.

Custom Logos

The Cisco LogoTool software allows third-party developers to create MSO (Multiple System Operator) logos and channel logos that will be seen by subscribers on the Interactive Program Guide and on other digital services.

For services that carry audio using the music application, you can use the MSO logo or channel logo as a screen saver. For more information on the LogoTool software, refer to the *LogoTool Software User's Guide*.

Recommended Setting

Enable this option if you are using the music application URL (**bfs://resapp/music**) for audio-based services. This option is only available if you created the service using the URL provided in this section. If you create the service with a watchtv URL, you cannot specify a screen saver.

Choosing a Screen Saver for Music Channels

To choose a screen saver for music channels, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **Misc Settings** tab.
Result: The Misc Settings tab appears in the forefront.

Choose a Screen Saver for Music Channels, Continued

5. At the **Music Screen Saver** field, select one of the following options for the screen saver:
 - **None** means that no music screen saver is displayed.
 - **Plain** means that the music channel background appears with no text.
 - **Black Screen** means that the screen will go black after 5 minutes. The music will continue to play.
 - **MSO Logo** means that your cable service provider logo will appear in various places on the screen.
 - **Tuned Channel Logo** means that a logo for the tuned channel will appear in various places on the screen.
 - **Channel Logo Number** means that a channel logo that you specify will appear in various places on the screen. If you select this option, the Channel Logo Number field appears. This option allows you to specify the channel number of the logo that you want to appear.
6. If you selected the Channel Logo Number option, at the Channel Logo Number field, enter the logo number for the logo you want to use.
7. Click **Save**.

Result: The music channel will display the screen saver you selected when subscribers do not touch the set-top or the remote control for 5 minutes.
8. Click **Cancel**.

Result: The DHCT Configure prompt opens.
9. Click **File** and **Close** to close the DHCT Configure prompt.

Display Title, Track, Artist Information, and Promotional Text for Music Channels

Introduction

The Display Text Along With Music Data option lets you specify whether to display title, track, artist information, and promotional text on music channels while the music is playing.

Important: This option is only available if these conditions are met:

- You created the service that carries audio using the music application with the (bfs://resapp/music) URL.
- The content provider sends the data in the proper format as part of the stream.

Recommended Setting

If any of your music service provides supply text, enable this option. Otherwise, disable this option.

Displaying Promotional Text with the Screen Saver

To display promotional text on music channels while the music is playing, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **Misc Settings** tab.
Result: The Misc Settings tab appears in the forefront.
5. Do you want to display promotional text with the screen saver?
 - If **yes**, be sure the option for **Display Text Along with Music Data** is selected.
 - If **no**, be sure the option for **Display Text Along with Music Data** is *not* selected.
6. Click **Save**.
Result: When this field is selected, promotional text for the music channel is displayed. This promotional text is supplied by the music service provider.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt

Chapter 10

Parental Control Options

Overview

Introduction

The Parental Control feature allows subscribers to block programs by channel, program rating, and time of day. You may also choose to allow subscribers to hide the titles of programs that are blocked. If your subscribers have young children in the home, you may want to offer some or all the options for Parental Control.

Important:

- The procedures in this chapter cover a global configuration. When you send a global configuration, *all* set-tops in your system are affected.
- If you want to send a configuration to all the set-tops in a hub, see **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1.
- If you want to change a setting for only one set-top, see **Send a Configuration to a Single Set-Top** in Chapter 1.
- If you want to set the Staging Defaults, see **Set Staging Defaults** in Chapter 1.

This chapter provides a detailed explanation of how Parental Control works and a description of the Parental Control options that you can set to best suit your subscribers.

In This Chapter

This chapter contains the following topics.

Topic	See Page
How Parental Control Works	10-3
Parental Control Options That Affect the Subscribers' Experience	10-9
Turn Off Parental Control for an Individual Program, Channel, or Block of Time with Restricted Unblocking	10-10
Block Programs by Rating	10-12
Block Programs by Time	10-13
Block Channels from the Quick Settings Menu	10-14

Overview, Continued

Topic	See Page
Turn Parental Control On and Off from the Quick Settings Menu	10-15
Select Channels to Block by Default	10-16
Select Ratings to Block by Default	10-18
Block Titles of Blocked Programs	10-19
Enable the Blocking PIN Lockout	10-20
Specify the Length of the Timer That Starts When a Subscriber Enters an Incorrect Blocking PIN	10-22
Specify How Many Times a Subscriber Can Try to Enter a Blocking PIN	10-24
Specify the Length of Time That a Channel is Locked Out When a Subscriber Enters an Incorrect Blocking PIN	10-26
Specify the Telephone Number to Call When Channels are Locked Out	10-29

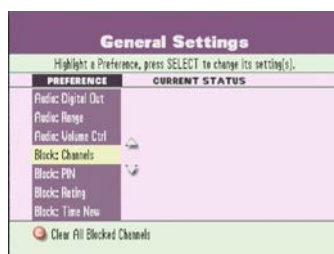
How Parental Control Works

Introduction

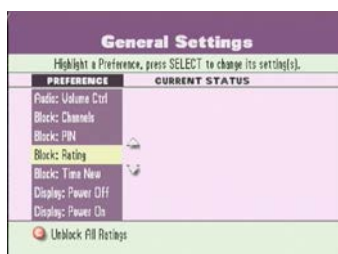
The Parental Control feature allows subscribers to block programs by channel, program rating, or time of day. You may also choose to allow subscribers to hide the titles of programs that are blocked. This section describes how subscribers can block programs and turn Parental Control on and off. A table is also provided to show how the subscribers' viewing experience is affected by the Parental Control settings.

Block Programs from the General Settings Menu

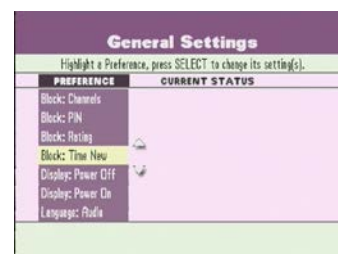
Subscribers can use the General Settings menu to select which programs they want to block. You can configure which blocking options are offered on the General Settings menu. The following screens show the options that are available on the General Settings menu for blocking programs.



Block by Channel



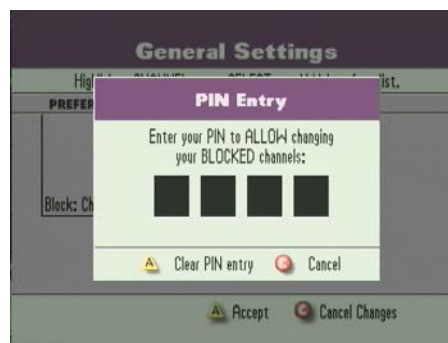
Block by Rating



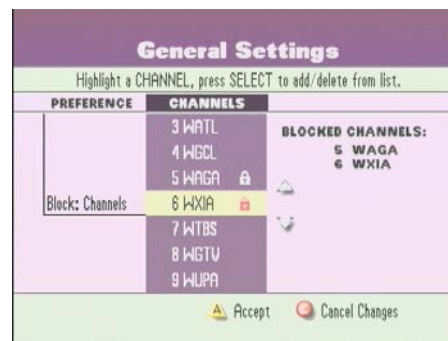
Block by Time

For example, if subscribers want to block all programs on certain channels, they must 1) go to the General Settings menu and select Block:Channel 2) enter a PIN, and 3) select the channels they want to block.

The set-top displays a prompt similar to the screen to the right when the subscriber selects the Block:Channel option.



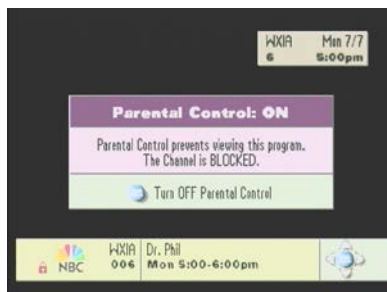
When subscribers enter a correct PIN, they can choose which channels to block. A lock appears next to each blocked channel as shown in the screen to the right.



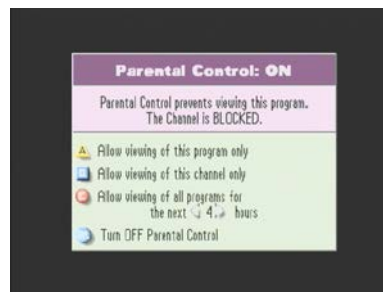
How Parental Control Works, Continued

Turn Off Parental Control from a Barker

When subscribers tune to a blocked program, the set-top displays a barker that asks subscribers whether they want to turn off Parental Control. You can configure whether the barker prompts subscribers to turn off Parental Control for *all* programs, or whether to turn off Parental Control for an individual program, channel, or block of time. The feature is referred to as *restricted unblocking*. For example, if a subscriber tunes to a blocked channel, one of the following prompt screens will appear.

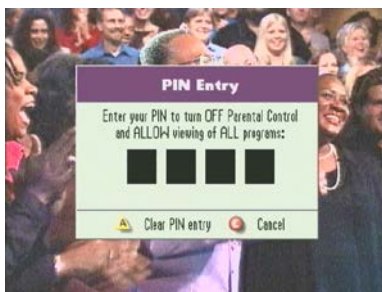


Turn Off Parental Control for All Programs

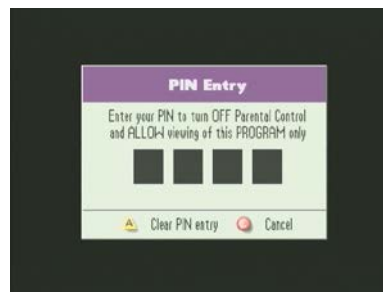


Turn Off Parental Control with Restricted Unblocking

Subscribers must enter a PIN to turn off Parental Control. The prompt that appears asking for a PIN will differ depending upon whether restricted unblocking is enabled. If restricted unblocking is not enabled, then the set-top displays a prompt that asks the subscriber to enter a PIN to turn off Parental Control for *all* programs. If restricted unblocking is enabled, then the set-top displays a prompt that asks the subscriber to enter a PIN to turn off Parental Control for this program only, for this channel, for a specific time frame, or for all programs. Examples of the prompts are illustrated below.



Enter PIN to Turn Off Parental Control for All Programs



Enter PIN to Turn Off Parental Control for a Specific Program

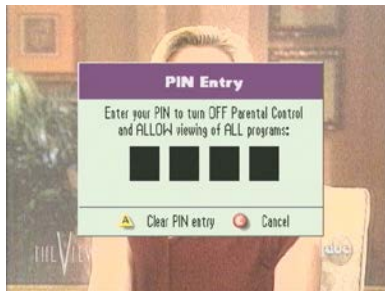
How Parental Control Works, Continued

Turn Off Parental Control from the Quick Settings Menu

As an alternate method, subscribers can turn off Parental Control from the Quick Settings menu as shown in the following screen.



To turn off Parental Control from the Quick Settings menu, the set-top displays a prompt that asks the subscriber to enter a PIN as shown below.



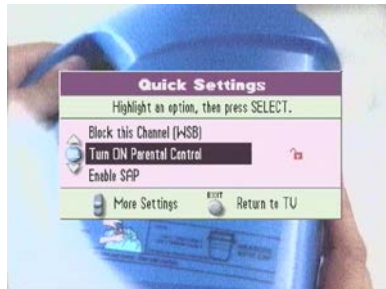
How Parental Control Works, Continued

Turn On Parental Control by Powering Off the Set-Top and Powering It Back On

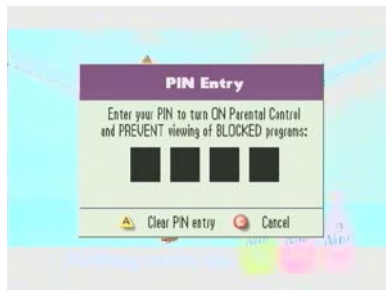
If Parental Control is turned off, subscribers can turn on Parental Control by powering off the set-top and powering it back on. No PIN is required for this step.

Turn On Parental Control from the Quick Settings Menu

As an alternate method, subscribers can turn on Parental Control from the Quick Settings menu.



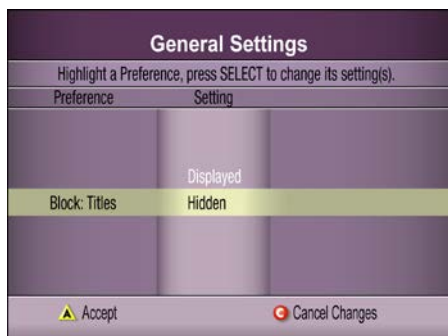
To turn on Parental Control, the set-top displays a prompt that asks the subscriber to enter a PIN as shown below.



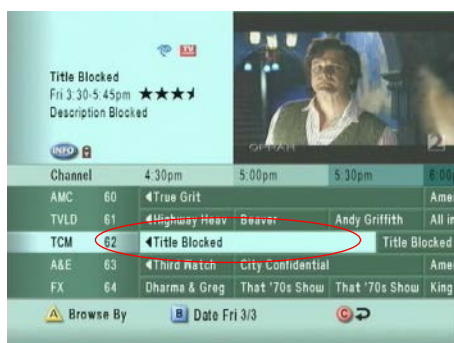
How Parental Control Works, Continued

Block Titles of Blocked Programs from the General Settings Menu

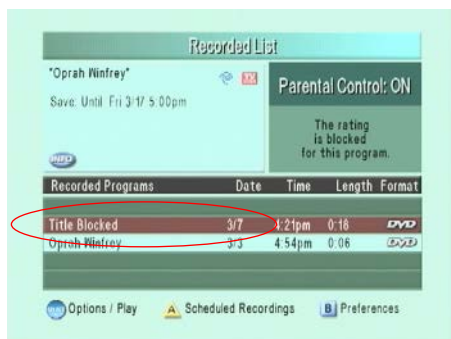
In addition to being able to block programs, subscribers can hide titles for blocked programs. Subscribers can use the General Settings menu to block titles of programs that have been blocked by the Parental Control feature. The following screen shows the Block:Titles option on the General Settings Menu.



When subscribers enable this feature by selecting **Hidden**, the titles of programs that have been blocked by the Parental Control feature do not appear in the IPG. Instead, "Title Blocked" displays for the program title as shown in the following example.



For Digital Video Recorders (DVRs) and DVRs with built-in DVD players, this feature prevents the title of any recordings that have been blocked by the Parental Control feature from showing in the Recorded List, Scheduled Recordings, and Recorded Program Options screens. Instead, "Title Blocked" displays for the title of the recording as shown in the following example.



How Parental Control Works, Continued

How Parental Control Settings Affect the Subscribers' Viewing Experience

The following table shows how the Parental Control settings affect whether a subscriber can view a program.

	Parental Control On	Parental Control Off
Program Blocked and Block:Title is Enabled	A blocked banner is shown instead of the program, and a Locked icon (🔒) appears in the channel banner. Any blocked programs appear in the IPG and in the Recorded List with the words Title Blocked instead of the program title.	The program is shown and an Unlocked icon (🔓) appears in the channel banner. All programs titles are displayed in the IPG and Recorded List.
Program Blocked and Block:Title is Not Enabled	A blocked banner is shown instead of the program, and a Locked icon (🔒) appears in the channel banner. All programs titles are displayed in the IPG and Recorded List.	The program is shown and an Unlocked icon (🔓) appears in the channel banner. All programs titles are displayed in the IPG and Recorded List.
Program Not Blocked	The program is shown and <i>no</i> icon appears in the channel banner.	The program is shown and <i>no</i> icon appears in the channel banner.

Parental Control Options That Affect the Subscribers' Experience

Introduction

The SARA Application Server allows you to select optional behaviors related to parental control functions. This section describes the parental control options that affect the subscribers' experience.

What Parental Control Options Affect the Subscribers' Experience?

The following parental control options are available:

- **Restricted Unblocking.** Specify whether subscribers can turn off parental control for an individual program, channel, or block of time.
- **Block by Rating.** Specify whether subscribers can block programs by rating.
- **Block by Time.** Specify whether subscribers can block programs by time.
- **Block Channels from Quick Settings.** Specify whether subscribers can block or unblock channels from the Quick Settings Menu.
- **Turn Parental Control On and Off from the Quick Settings Menu.** Specify whether subscribers can turn parental control on or off from the Quick Settings Menu.
- **Select Channels to Block by Default.** Select channels that will be blocked by default on the set-top.
- **Select Ratings to Block by Default.** Allows the cable service provider to automatically block programs with a certain rating during staging.
- **Block Titles of Programs.** Prevent titles of blocked programs from appearing in the IPG, Recorded List, Scheduled Recordings screen, or Recorded Program Options screen.
- **Enable the Blocking PIN Lockout.** Specify whether you lock out all blocking PIN entries after a subscriber enters an incorrect PIN according to the lockout parameters that you enter.
- **Specify the Length of the Timer that Starts When a Subscriber Enters an Incorrect Blocking PIN.** Specify the length of the timer (in minutes) that starts when a subscriber enters an incorrect blocking PIN.
- **Specify How Many Times a Subscriber Can Try to Enter a Blocking PIN.** Specify how many times a subscriber can try to enter an incorrect blocking PIN within a specified time before being locked out from the channel.
- **Specify the Length of Time That a Channel is Locked Out When a Subscriber Enters an Incorrect Blocking PIN.** Specify the length of time (in minutes) that a channel will be locked out if a subscriber enters an incorrect blocking PIN too many times in a specified time frame.
- **Specify the Telephone Number to Call When Channels are Locked Out.** Specify the telephone number that displays when a channel is locked out because a subscriber entered an incorrect PIN too many times in a specific time frame.

The procedures for configuring each option are covered next in this guide.

Turn Off Parental Control for an Individual Program, Channel, or Block of Time with Restricted Unblocking

Introduction

The Blocked Barker Allows Restricted Unblocking option lets you specify whether subscribers can turn off Parental Control for an individual program, channel, or block of time. The feature is referred to as *restricted unblocking*. If you enable restricted unblocking and a subscriber selects a blocked channel, a blocked barker appears with the following options:

- Press A on the remote control to allow viewing of this program only.
- Press B on the remote control to allow viewing of this channel only.
- Press C on the remote control to allow viewing of all programs for the next 2, 4, 6, or 8 hours.
- Press SELECT on the remote control to turn off Parental Control for all blocks.

If disabled and a subscriber selects a blocked channel, the Blocked Barker displays “Press SELECT on the remote control to Turn Off Parental Control.” When subscribers turn off Parental Control, all blocking is disabled and any program rating or channel can be viewed.

Recommended Setting

Enable this option to allow restricted unblocking.

Allowing Subscribers to Unlock an Individual Program, Channel, or Block of Time

To allow subscribers to unlock an individual program, channel, or block of time, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **Base Application** tab.

Result: The Base Application tab appears in the forefront.

5. Do you want to unlock an individual program, channel, or block of time?

- If **yes**, be sure the option for **Blocked Barker Allows Restricted Unblocking** is selected.
- If **no**, be sure the option for **Blocked Barker Allows Restricted Unblocking** is *not* selected. The subscriber is prompted to turn off all parental control.

Turn Off Parental Control for an Individual Program, Channel, or Block of Time with Restricted Unblocking, Continued

6. Click **Save**.

Result: If you selected yes in step 5, the A-B-C option appears on the blocked barker when a subscriber tunes to a blocked channel or a program blocked by rating or time of day.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Block Programs by Rating

Introduction

The Block: Rating option lets you specify whether subscribers can block programs by rating. If this field is selected, the General Settings menu on the set-top lets subscribers block programs based on their rating. If you do not enable this option, subscribers cannot block programs by rating.

Important: We recommend that you allow subscribers to block programs by rating.

Note: The Block Programs Rated option allows the cable service provider to specify which ratings are blocked during the staging process. When the set-top is delivered to the home, these particular ratings are automatically blocked. This option is helpful if the cable service provider wants to automatically block certain ratings. For more information, see **Select Ratings to Block by Default**, later in this chapter.

Recommended Setting

Enable this option to allow subscribers to block programs by rating.

Blocking Programs by Rating

To allow subscribers to block programs by rating, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.

5. Do you want to allow subscribers to block programs by rating?

- If **yes**, be sure the option for **Block:Rating** is selected.
- If **no**, be sure the option for **Block:Rating** is *not* selected.

6. Click **Save**.

Result: If you selected yes in step 5, subscribers can now block programs by rating from the General Settings menu on the set-top.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Block Programs by Time

Introduction

The Block: Time option lets you specify whether subscribers can block programs by time. If this field is selected, the General Settings menu on the set-top lets subscribers block all programs at certain times of the day. If you do not enable this option, subscribers cannot block programs by time.

Important: We recommend that you allow subscribers to block programs by time.

Recommended Setting

Enable this option to allow subscribers to block programs by time.

Blocking Programs by Time

To allow subscribers to block programs by time, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.

2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.

5. Do you want to allow subscribers to block programs by time?

- If **yes**, be sure the option for **Block:Time** is selected.
- If **no**, be sure the option for **Block:Time** is *not* selected.

6. Click **Save**.

Result: If you selected yes in step 5, subscribers can now block programs by time from the General Settings menu on the set-top.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Block Channels from the Quick Settings Menu

Introduction

The Has Block This Channel option allows subscribers to use Parental Control to block or unblock the current channel from the Quick Settings menu on the set-top. If you do not enable this option, the Quick Settings menu does not contain an option to block the current channel. When disabled, subscribers must use the General Settings menu to block or unblock a channel.

Recommended Setting

Enable this option to allow subscribers to block channels from the Quick Settings menu.

Allowing Subscribers to Block Channels from the Quick Settings Menu

To allow subscribers to block or unblock channels from the Quick Settings menu, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **Quick Settings** tab.
Result: The Quick Settings tab appears in the forefront.
5. Do you want to allow subscribers to block or unblock channels from the Quick Settings menu?
 - If **yes**, be sure the option for **Has Block This Channel** is selected.
 - If **no**, be sure the option for **Has Block This Channel** is *not* selected. Subscribers must use the General Settings menu to block or unblock channels.
6. Click **Save**.
Result: If you selected yes in step 5, subscribers can block or unblock channels from the Quick Settings menu on the set-top.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Turn Parental Control On and Off from the Quick Settings Menu

Introduction

The Has Blocking option allows subscribers to turn on or turn off Parental Control from the Quick Settings menu on the set-top.

If this field is not enabled, the Quick Settings menu does not contain an option to turn Parental Control on and off. Instead, subscribers must turn off Parental Control from a blocked barker. In this situation, subscribers must power the set-top off and on to turn Parental Control back on.

Recommended Setting

Enable this option to allow subscribers to turn Parental Control on and off from the Quick Settings menu.

Turning Parental Control On and Off from the Quick Settings Menu

To allow subscribers to turn Parental Control on and off from the Quick Settings menu, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **Quick Settings** tab.
Result: The Quick Settings tab appears in the forefront.
5. Do you want to allow subscribers to turn Parental Control on and off from the Quick Settings menu?
 - If **yes**, be sure the option for **Has Blocking** is selected.
 - If **no**, be sure the option for **Has Blocking** is not selected. Subscribers must turn off Parental Control from a blocked barker and power the set-top off and on to turn Parental Control back on.
6. Click **Save**.
Result: If you selected yes in step 5, subscribers can now turn Parental Control on and off from the Quick Settings menu on the set-top.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Select Channels to Block by Default

Introduction

The Blocked Channel Number option allows the cable service provider to specify which channels are blocked during the staging process. When the set-top is delivered to the home, these particular channels are automatically blocked. This option is helpful if the cable service provider wants to automatically block channels that offer adult content. The Blocked Channel Numbers option *only* appears in the Staging Defaults window.

The Addressable Configuration window contains a similar option called “Additional Blocked Channel Numbers.” On that window, this field lets you specify *additional* channels that should be blocked on the set-top. It does *not* clear any blocked channels that the subscriber has already set.

Recommended Setting

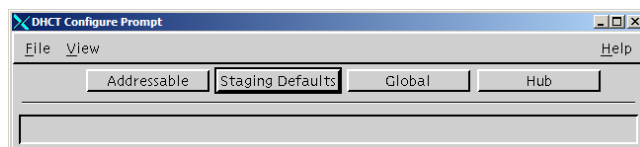
Select the Channel Number(s) option and enter the channels that you want to block during the staging process. Type in the channel number with a comma between each number, or you can type in a range of numbers, such as 1-4.

Selecting Channels to Block by Default

To select the channels that you want to block by default for the set-top, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

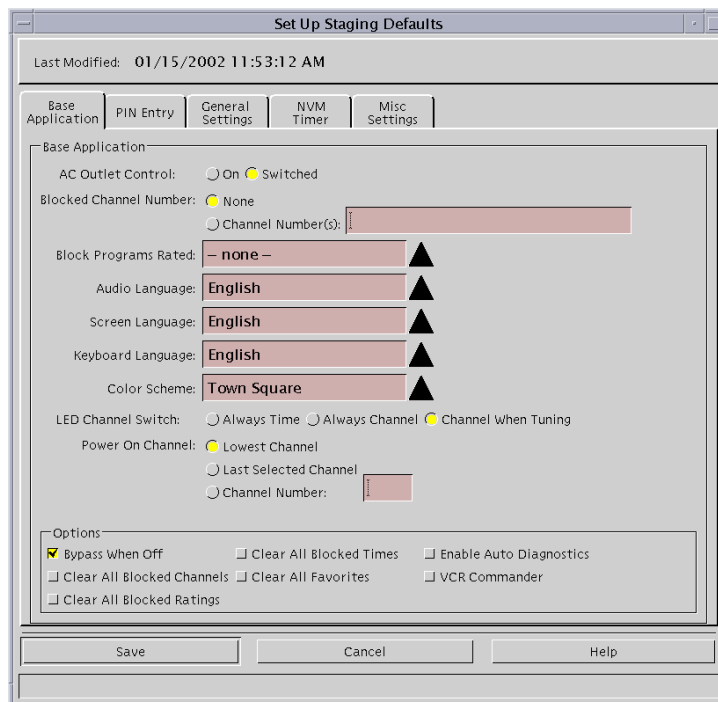
Result: The DHCT Configure Prompt window opens.



Select Channels to Block by Default, Continued

3. Select **Staging Defaults**.

Result: The Set Up Staging Defaults window opens with the Base Application tab selected.



4. For the **Blocked Channel Number** field, select one of the following options:
 - Select **None** if you do not want to block any channels (or any additional channels). Go to step 6.
 - Select **Channel Number(s)** to specify channels that should be blocked. Go to step 5.
5. In the space provided, type the channel numbers that you want to block, separated by a comma and a space.

Example: 26, 52, 78, 79

6. Click **Save**.

Result: Any channel numbers that you entered will be blocked by default for the set-top.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Select Ratings to Block by Default

Introduction

The Block Programs Rated option allows the cable service provider to automatically block programs with a certain rating during staging. This option *only* appears in the Staging Defaults window and the Addressable Configuration window.

If you do not enable this option, then no ratings are blocked when the set-top is staged or installed for the first time. Subscribers must use the Block:Rating option in the General Settings menu to set up any ratings blocks. When subscribers select a rating that they want to block, all programs with that rating (and more restrictive ratings) are blocked.

NR versus NR-Adult Rating

Do not confuse the NR rating with the NR-Adult rating. If you block programs that are not rated by the data provider (programs with an NR rating), then any program that does not have a rating, such as HGTV programs or the news, are blocked. If you block programs with an NR-Adult rating, all programs with this rating (and more restrictive rating)s are blocked.

Recommended Setting

Enable this option to block programs with a certain rating during the staging process. Enter the rating that you want to block, and all programs with this rating (and more restrictive ratings) are blocked.

Blocking Programs by Rating

To block programs by rating, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Staging Defaults**.
Result: The Set Up Staging Defaults window opens with the Base Application tab selected.
4. For the **Block Programs Rated** option, click the arrow to select a rating you want to block.
Result: All programs with the selected rating are blocked by default.
Example: If you select R, programs rated NC-17 and NR-Adult will also be blocked.
5. Click **Save**.
Result: When subscribers tune to a program that has a ratings block, they will be prompted for a PIN. Subscribers can still go into the General Settings menu and adjust any blocked ratings.
6. Click **Cancel**.
Result: The DHCT Configure prompt opens.
7. Click **File** and **Close** to close the DHCT Configure prompt

Block Titles of Blocked Programs

Introduction

The Block Titles of Blocked Programs option allows subscribers to prevent the titles of programs that have been blocked by the Parental Control feature from showing in the IPG. Instead, "Title Blocked" displays for the program title. For Digital Video Recorders (DVRs) and DVRs with built-in DVD players, the SARA client prevents the title of any recordings that have been blocked by the Parental Control feature from showing in the Recorded List, Scheduled Recordings, and Recorded Program Options screens as well. Instead, "Title Blocked" displays for the title of the recording.

Recommended Setting

The default setting for this feature is disabled. When you disable this feature, set-tops show the titles of programs that are blocked by the Parental Control feature. When you enable this feature, set-tops display "Title Blocked" for programs that are blocked by the Parental Control feature. We recommend that you enable this feature to prevent the titles of material intended for a mature audience from being displayed.

Blocking Titles of Blocked Programs

To block the titles of programs that have been blocked by the Parental Control feature, complete the following steps.

Note: The Block Titles of Blocked Programs option is also available on the Set Up Addressable DHCT Configuration screen.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Staging Defaults**.

Result: The Set Up Staging Defaults window opens with the Base Application tab selected.

4. Select the **IPG** tab.

Result: The IPG tab appears in the forefront.

5. Make sure the option for **Block Titles of Blocked Programs** is selected.

6. Click **Save**.

Result: The titles of programs that have been blocked by the Parental Control feature will display "Title Blocked" on the IPG and on the Recorded List, Scheduled Recordings, and Recorded Program Options screens.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Enable the Blocking PIN Lockout

Introduction

The Enable Blocking PIN Lockout option lets you specify whether you lock out all blocking PIN entries after a subscriber enters an incorrect PIN according to the lockout parameters that you enter. The PIN Lockout feature reduces the chance that a child or unauthorized user will guess the blocking PIN through repeated attempts.

If you do not enable this option, subscribers can enter an unlimited number of PINs.

The screenshot shows the 'Set Up Global DHCT Configuration' window with the 'PIN Entry' tab selected. The 'Name' field is set to 'default' and 'Last Modified' is '09/28/2000 05:05:52 PM'. The 'PIN Call Number' is '(888) 555-1212'. Under the 'Blocking PIN' section, 'Lockout Time' is 5 minutes, 'Trial Timer' is 3 minutes, and 'Invalid Tries' is 5. The 'Enable Blocking PIN Lockout' checkbox is checked and circled in blue. Below this, under the 'Purchase PIN' section, 'Lockout Time' is 5 minutes, 'Trial Timer' is 3 minutes, and 'Invalid Tries' is 5. The 'Enable Purchase PIN Lockout' checkbox is also checked. At the bottom, there are 'Save', 'Cancel', and 'Help' buttons.

Disable or Change the Blocking PIN for a Group of Set-Tops

You can disable or change the Blocking PIN for a group of set-tops with the **IIIH** utility. For step-by-step instructions, see **Reset DHCT PINs With the setPin Transaction** in Chapter 8 of the *Cool Tools Utilities User's Guide*.

Enable the Blocking PIN Lockout, Continued

Recommended Setting

Enable the lockout.

Enabling the Blocking PIN Lockout

To enable the Blocking PIN Lockout, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **PIN Entry** tab.
Result: The PIN Entry tab appears in the forefront.
5. Do you want to enable the Blocking PIN lockout?
 - If **yes**, make sure the **Enable Blocking PIN Lockout** field under Blocking PIN is selected.
 - If **no**, make sure the **Enable Blocking PIN Lockout** field under Blocking PIN is selected.
6. Click **Save**.
Result: If you selected yes in step 5, all PIN entry is locked out after a subscriber enters an invalid PIN according to the lockout parameters that you specify.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Specify the Length of the Timer That Starts When a Subscriber Enters an Incorrect Blocking PIN

Introduction

The Blocking PIN Trial Timer option lets you specify the length of the timer (in minutes) that starts when a subscriber enters an incorrect blocking PIN. If the subscriber tries too many times to enter a PIN before this timer runs out, then the set-top locks out the channel.

The screenshot shows the 'Set Up Global DHCT Configuration' window with the 'PIN Entry' tab selected. The 'Blocking PIN' section is circled in green, highlighting the 'Lockout Time', 'Trial Timer', and 'Invalid Tries' settings. The 'Purchase PIN' section is also visible below it.

Set Up Global DHCT Configuration

Name: default Last Modified: 09/28/2000 05:05:52 PM

Base Application PIN Entry General Settings Barkers Quick Settings IPPV Misc Settings IPG

PIN Call Number: (888) 555-1212

Blocking PIN

Lockout Time: 15 minutes

Trial Timer: 3 minutes

Invalid Tries: 5

☒ Enable Blocking PIN Lockout

Purchase PIN

Lockout Time: 15 minutes

Trial Timer: 3 minutes

Invalid Tries: 5

☒ Enable Purchase PIN Lockout

Options

☒ Enable PIN On LEDs

Save Cancel Help

Specify the Length of the Timer That Starts When a Subscriber Enters an Incorrect Blocking PIN, Continued

Lockout Parameters

The Blocking PIN Trial Timer option works in conjunction with the Invalid Tries, Lockout Time, and Enable Blocking PIN Lockout options to determine whether a channel is locked out.

Example: Assume the attributes are set as follows:

- **Invalid Tries** – 3
- **Trial Timer** – 1 minute
- **Lockout Time** – 30 minutes
- **Enable Blocking PIN Lockout** – Enabled

In this case, if a subscriber enters three incorrect PINs within 1 minute, the set-top will lock out the channel for 30 minutes.

Important: Be sure to enter the same values for both the Blocking PIN Lockout and Purchase PIN Lockout options.

Recommended Setting

Set the trial timer to 10 minutes.

Specify the Length of the Timer That Starts When a Subscriber Enters an Incorrect Blocking PIN

To specify the length of the timer that starts when a subscriber enters an incorrect blocking PIN too many times, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **PIN Entry** tab.
Result: The PIN Entry tab appears in the forefront.
5. Make sure the **Enable Blocking PIN Lockout** field under Blocking PIN is selected.
6. In the **Trial Timer** field under Blocking PIN, enter the number of minutes for the timer that will start after a subscriber enters an incorrect blocking PIN.
7. Click **Save**.
Result: When subscribers enter an incorrect blocking PIN, the timer starts for the length of time you specified in step 6.
8. Click **Cancel**.
Result: The DHCT Configure prompt opens.
9. Click **File** and **Close** to close the DHCT Configure prompt.

Specify How Many Times a Subscriber Can Try to Enter a Blocking PIN

Introduction

The Blocking PIN Invalid Tries option lets you specify how many times a subscriber can try to enter an incorrect blocking PIN within a specified time frame before being locked out from the channel.

Set Up Global DHCT Configuration

Name: default Last Modified: 09/28/2000 05:05:52 PM

Base Application PIN Entry General Settings Barkers Quick Settings IPPV Misc Settings IPG

PIN Ctrl Number: (888) 555-1212

Blocking PIN

Lockout Time: 5 minutes

Trial Timer: 3 minutes

Invalid Tries: 5

☒ Enable Blocking PIN Lockout

Purchase PIN

Lockout Time: 5 minutes

Trial Timer: 3 minutes

Invalid Tries: 5

☒ Enable Purchase PIN Lockout

Options

☒ Enable PIN On LEDs

Save Cancel Help

Lockout Parameters

The Blocking PIN Invalid Tries option works in conjunction with the Trial Timer, Lockout Time, and Enable Blocking PIN Lockout options to determine whether a channel is locked out.

Example: Assume the attributes are set as follows:

- **Invalid Tries** – 3
- **Trial Timer** – 1 minute
- **Lockout Time** – 30 minutes
- **Enable Blocking PIN Lockout** – Enabled

In this case, if a subscriber enters three incorrect PINs within 1 minute, the set-top will lock out the channel for 30 minutes.

Important: Be sure to enter the same values for both the Blocking PIN Lockout and Purchase PIN Lockout options.

Specify How Many Times a Subscriber Can Try to Enter a Blocking PIN, Continued

Recommended Setting

Set the invalid tries to 3 tries.

Specify the Number of Times That a Subscriber Can Try to Enter a Blocking PIN

To specify how many times subscribers can try to enter an incorrect blocking PIN within a specified time frame before being locked out from the channel, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **PIN Entry** tab.
Result: The PIN Entry tab appears in the forefront.
5. Make sure the **Enable Blocking PIN Lockout** field under Blocking PIN is selected.
6. In the **Invalid Tries** field under Blocking PIN, enter the number times that subscribers can try to enter a blocking PIN before the set-top blocks them out. Typically, the invalid tries field is set to 3 or 4.
7. Click **Save**.
Result: The set-top will allow the subscriber to enter a blocking PIN for the number of times you specified in step 6 within a specified time frame.
8. Click **Cancel**.
Result: The DHCT Configure prompt opens.
9. Click **File** and **Close** to close the DHCT Configure prompt.

Specify the Length of Time That a Channel is Locked Out When a Subscriber Enters an Incorrect Blocking PIN

Introduction

The Blocking PIN Lockout Time option lets you specify the length of time (in minutes) that a channel will be locked out if a subscriber enters an incorrect blocking PIN too many times in a specified time frame. At the end of this time, the lockout will be removed, and the subscriber will be able to enter the correct PIN.

The screenshot shows the 'Set Up Global DHCT Configuration' window. The 'PIN Entry' tab is selected. The 'Blocking PIN' section is highlighted with a red circle. It contains the following settings:

- PIN Call Number: (888) 555-1212
- Blocking PIN: [Redacted]
- Lockout Time: 5 minutes
- Trial Timer: 3 minutes
- Invalid Tries: 5
- ☒ Enable Blocking PIN Lockout

The 'Purchase PIN' section also has similar settings:

- Lockout Time: 5 minutes
- Trial Timer: 3 minutes
- Invalid Tries: 5
- ☒ Enable Purchase PIN Lockout

The 'Options' section includes:

- ☒ Enable PIN On LEDs

At the bottom, there are buttons for 'Save', 'Cancel', and 'Help'.

Specify the Length of Time That a Channel is Locked Out When a Subscriber Enters an Incorrect Blocking PIN, Continued

Lockout Parameters

The Blocking PIN Lockout Time option works in conjunction with the Invalid Tries, Trial Timer, and Enable Blocking PIN Lockout options to determine whether a channel is locked out.

Example: Assume the options are set as follows:

- **Invalid Tries** – 3
- **Trial Timer** – 1 minute
- **Lockout Time** – 30 minutes
- **Enable Blocking PIN Lockout** – Enabled

In this case, if a subscriber enters three incorrect PINs within 1 minute, the set-top will lock out the ability to unlock the channel for 30 minutes.

Important: Be sure to enter the same values for both the Blocking PIN Lockout and Purchase PIN Lockout options.

Recommended Setting

Set the lockout time to 10 minutes.

Specifying the Length of Time to Lock Out a Channel After a Subscriber Enters an Incorrect Blocking PIN

To specify the length of time to lock out a channel after a subscriber enters an incorrect blocking PIN too many times in a specified time frame, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **PIN Entry** tab.
Result: The PIN Entry tab appears in the forefront.
5. Make sure the **Enable Blocking PIN Lockout** field under Blocking PIN is selected.

Specify the Length of Time That a Channel is Locked Out When a Subscriber Enters an Incorrect Blocking PIN, Continued

6. In the **Lockout Time** field under Blocking PIN, enter the number of minutes you want to lock out a channel after a subscriber enters an incorrect PIN too many times in a specified time frame. Values are 1 to 30 minutes.

7. Click **Save**.

Result: When subscribers enter an incorrect blocking PIN too many times in a specified time frame, the channel will remain locked out for the amount of time you specified in step 6. When the time elapses, the subscriber can try to enter a new PIN.

8. Click **Cancel**.

Result: The DHCT Configure prompt opens.

9. Click **File** and **Close** to close the DHCT Configure prompt.

Specify the Telephone Number to Call When Channels are Locked Out

Introduction

The PIN Call Number option lets you specify the telephone number that displays when a channel is locked out because a subscriber entered an incorrect PIN too many times in a specific time frame. The subscriber must call this telephone number to have the PIN reset in order to access the channel again.

Specifying the Telephone Number to Call When Channels are Locked Out

To specify the telephone number that subscribers should call when a channel is locked out because they entered a PIN incorrectly, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **PIN Entry** tab.
Result: The PIN Entry tab appears in the forefront.
5. In the **PIN Call Number** field, enter the telephone number for subscribers to call to have their PIN reset.
6. Click **Save**.
Result: The barker will display that your PIN has been blocked and will provide a phone number for the subscriber to call when they attempt to enter an invalid PIN. If you do not enter a phone number, then the barker will appear with no phone number.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Chapter 11

Pay-Per-View and Impulse Pay-Per-View Options

Overview

Introduction

With Pay-Per-View (PPV) and Impulse Pay-Per-View (IPPV) subscribers pay for individual programs. This chapter provides the options that you can configure for PPV and IPPV to best suit your subscribers.

Important:

- The procedures in this chapter cover a global configuration. When you send a global configuration, *all* set-tops in your system are affected.
- If you want to send a configuration to all the set-tops in a hub, see **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1.
- If you want to change a setting for only one set-top, see **Send a Configuration to a Single Set-Top** in Chapter 1.
- If you want to set the Staging Defaults, see **Set Staging Defaults** in Chapter 1.

In This Chapter

This chapter contains the following topics.

Topic	See Page
Specify a Telephone Number for Help with Purchasing IPPV Events	11-2
Remove Past Purchases from the PPV Purchases List	11-3
Enable the Purchase PIN Lockout	11-4
Specify the Length of Time That All PPV Services Will Be Locked Out if a Subscriber Enters an Incorrect Purchase PIN	11-6
Specify the Length of the Timer That Starts When a Subscriber Enters an Incorrect Purchase PIN	11-8
Specify How Many Times a Subscriber Can Try to Enter a Purchase PIN	11-10
Change the Look of the PPV Screen Background	11-12

Specify a Telephone Number for Help with Purchasing IPPV Events

Introduction

The Purchase Problem Phone option lets you specify the telephone number that appears on the purchase barker. Subscribers can call this number if they have problems with purchasing IPPV events. If you do not enter a telephone number, then a purchase barker appears without a telephone number.

Specifying a Telephone Number for Help with Purchasing IPPV Events

To specify a number that appears on the purchase or channel barker, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **IPPV** tab.
Result: The IPPV tab appears in the forefront.
5. In the **Purchase Problem Phone** field, enter the telephone number that you want subscribers to call if they have problems purchasing PPV or IPPV events.
6. Click **Save**.
Result: A telephone number appears on the purchase barker when subscribers purchase PPV or IPPV events.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Remove Past Purchases from the PPV Purchases List

Introduction

The Past Purchase Day option lets you specify the day of the month when past purchases are removed from the PPV Purchases list on the General Settings menu of the set-top. For example, if this field contains 1, then all PPV purchases are removed from the PPV Purchase list in the General Settings menu on the first day of every month.

Recommended Setting

Remove the past purchases on the first day of the billing cycle.

Removing Past Purchases from the PPV Purchases List

To specify when to remove past purchases from the PPV Purchase list, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **IPPV** tab.
Result: The IPPV tab appears in the forefront.
5. In the **Past Purchase Day** field, enter the day of the month when you want the set-top to remove past purchases from the PPV Purchases list on the General Settings menu.
6. Click **Save**.
Result: Any PPV purchases are removed from the PPV Purchase List on the day of the month that you specified in step 5.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Enable the Purchase PIN Lockout

Introduction

The Enable Purchase PIN Lockout option lets you specify whether you lock out all purchase PIN entries after a subscriber enters an incorrect PIN according to the lockout parameters that you specify. The PIN Lockout feature reduces the chance that a child or unauthorized user will guess the purchase PIN through repeated attempts.

If you do not enable this option, subscribers can enter an unlimited number of PINs.

The screenshot shows the 'Set Up Global DHCT Configuration' window with the 'PIN Entry' tab selected. The 'Name' field is set to 'default' and 'Last Modified' is '09/28/2000 05:05:52 PM'. The 'PIN Call Number' is '(888) 555-1212'. Under the 'Blocking PIN' section, 'Lockout Time' is 5 minutes, 'Trial Timer' is 3 minutes, and 'Invalid Tries' is 5. The 'Enable Blocking PIN Lockout' checkbox is checked. Under the 'Purchase PIN' section, 'Lockout Time' is 5 minutes, 'Trial Timer' is 3 minutes, and 'Invalid Tries' is 5. The 'Enable Purchase PIN Lockout' checkbox is highlighted with a red circle. Below this, under the 'Options' section, the 'Enable PIN On LEDs' checkbox is also checked. At the bottom are 'Save', 'Cancel', and 'Help' buttons.

Enable the Purchase PIN Lockout, Continued

Recommended Setting

Enable the lockout.

Disable the Purchase PIN for a Group of Set-Tops

You can disable the Purchase PIN for a group of set-tops with the IIH utility. For step-by-step instructions, see **Reset DHCT PINs With the setPin Transaction** in Chapter 8 of the *CoolTools Utilities User's Guide*.

Enabling the Purchase PIN Lockout

To enable the Purchase PIN Lockout, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **PIN Entry** tab.
Result: The PIN Entry tab appears in the forefront.
5. Be sure the **Enable Purchase PIN Lockout** field under Purchase PIN is selected.
6. Click **Save**.
Result: All PIN entry is locked out after a subscriber enters an invalid PIN according to the lockout parameters that you specify.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Specify the Length of Time That All PPV Services Will Be Locked Out if a Subscriber Enters an Incorrect Purchase PIN

Introduction

The Purchase PIN Lockout Time option lets you specify the length of time (in minutes) that all PPV services will be locked out if a subscriber enters an incorrect purchase PIN too many times in a specified time frame. At the end of this time, the lockout will be removed, and the subscriber can try to enter the correct PIN.

The screenshot shows the 'Set Up Global DHCT Configuration' window with the 'PIN Entry' tab selected. The 'PIN Call Number' is set to '(888) 555-1212'. The 'Blocking PIN' section has 'Lockout Time' set to 5 minutes, 'Trial Timer' set to 3 minutes, and 'Invalid Tries' set to 5. The 'Enable Blocking PIN Lockout' checkbox is checked. The 'Purchase PIN' section, which is circled in red, has 'Lockout Time' set to 5 minutes, 'Trial Timer' set to 3 minutes, and 'Invalid Tries' set to 5. The 'Enable Purchase PIN Lockout' checkbox is checked. The 'Options' section has the 'Enable PIN On LEDs' checkbox checked. At the bottom are 'Save', 'Cancel', and 'Help' buttons.

Specify the Length of Time That All PPV Services Will Be Locked Out if a Subscriber Enters an Incorrect Purchase PIN, Continued

Lockout Parameters

The Purchase PIN Lockout Time option works in conjunction with the Invalid Tries, Trial Timer, and Enable Purchase PIN Lockout options to determine whether PPV services are locked out.

Example: Assume the options are set as follows:

- **Invalid Tries** – 3
- **Trial Timer** – 1 minute
- **Lockout Time** – 30 minutes
- **Enable Purchase PIN Lockout** – Enabled

In this case, if three incorrect PINs are entered within 1 minute, the set-top will lock out PPV services for 30 minutes.

Important: Be sure to enter the same values for both the Purchase PIN Lockout and Blocking PIN Lockout options.

Specifying the Length Of Time That PPV Services Will Be Locked Out if a Subscriber Enters an Incorrect Purchase PIN

To specify the length of time that PPV services will be locked out if an incorrect purchase PIN is entered too many times in a specific time frame, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **PIN Entry** tab.
Result: The PIN Entry tab appears in the forefront.
5. Be sure the **Enable Purchase PIN Lockout** field under Purchase PIN is selected.
6. In the **Lockout Time** field, enter the number of minutes that you want to lock out PPV services after an incorrect purchase PIN is entered too many times in a specified time frame. Values are 1 to 30 minutes.
7. Click **Save**.
Result: If a subscriber repeatedly enters an incorrect purchase PIN, PPV services are locked out for the amount of time you specified in step 6.
8. Click **Cancel**.
Result: The DHCT Configure prompt opens.
9. Click **File** and **Close** to close the DHCT Configure prompt.

Specify the Length of the Timer That Starts When a Subscriber Enters an Incorrect Purchase PIN

Introduction

The Purchase PIN Trial Timer option lets you specify the length of the timer (in minutes) that starts when a subscriber enters an incorrect purchase PIN. If the subscriber tries too many times to enter the PIN before this timer runs out, then the set-top locks out all PPV services.

The screenshot shows the 'Set Up Global DHCT Configuration' window with the 'PIN Entry' tab selected. The 'PIN Call Number' is set to '(888) 555-1212'. The 'Blocking PIN' section has 'Lockout Time' set to 5 minutes, 'Trial Timer' set to 3 minutes, and 'Invalid Tries' set to 5. The 'Purchase PIN' section is circled in red and has 'Lockout Time' set to 5 minutes, 'Trial Timer' set to 3 minutes, and 'Invalid Tries' set to 5. The 'Options' section has 'Enable PIN On LEDs' checked. The 'Save', 'Cancel', and 'Help' buttons are at the bottom.

Section	Lockout Time	Trial Timer	Invalid Tries
Blocking PIN	5 minutes	3 minutes	5
Purchase PIN	5 minutes	3 minutes	5

Specify the Length of the Timer That Starts When a Subscriber Enters an Incorrect Purchase PIN, Continued

Lockout Parameters

The Purchase PIN Trial Timer option works in conjunction with the Invalid Tries, Lockout Time, and Enable Purchase PIN Lockout options to determine whether PPV services are locked out.

Example: Assume the attributes are set as follows:

- **Invalid Tries** – 3
- **Trial Timer** – 1 minute
- **Lockout Time** – 30 minutes
- **Enable Purchase PIN Lockout** – Enabled

In this case, if a subscriber enters three incorrect PINs within 1 minute, the set-top will lock out PPV services for 30 minutes.

Important: Be sure to enter the same values for both the Purchase PIN Lockout and Blocking PIN Lockout options.

Recommended Setting

Set the timer to 30 minutes.

Specifying the Length of the Timer That Starts When a Subscriber Enters an Incorrect Purchase PIN

To specify the length of the timer that starts when a subscriber enters an incorrect purchase PIN too many times, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **PIN Entry** tab.

Result: The PIN Entry tab appears in the forefront.

5. Be sure the **Enable Purchase PIN Lockout** field under Purchase PIN is selected.

6. In the **Trial Timer** field under Purchase PIN, enter the number of minutes for the timer that you want to start after an incorrect purchase PIN is entered.

7. Click **Save**.

Result: When subscribers enter an incorrect purchase PIN, the timer starts for the length of time you specified in step 6.

8. Click **Cancel**.

Result: The DHCT Configure prompt opens.

9. Click **File** and **Close** to close the DHCT Configure prompt.

Specify How Many Times a Subscriber Can Try to Enter a Purchase PIN

Introduction

The Purchase PIN Invalid Tries option lets you specify how many times a subscriber can try to enter an incorrect purchase PIN within a specified time frame before being locked out from all PPV services.

Set Up Global DHCT Configuration

Name: default Last Modified: 09/28/2000 05:05:52 PM

Base Application PIN Entry General Settings Barkers Quick Settings IPPV Misc Settings IPG

PIN Call Number: (888)555-1212

Blocking PIN

Lockout Time: 5 minutes

Trial Timer: 3 minutes

Invalid Tries: 5

☒ Enable Blocking PIN Lockout

Purchase PIN

Lockout Time: 5 minutes

Trial Timer: 3 minutes

Invalid Tries: 5

☒ Enable Purchase PIN Lockout

Options

☒ Enable PIN On LEDs

Save Cancel Help

Lockout Parameters

The Purchase PIN Invalid Tries option works in conjunction with the Trial Timer, Lockout Time, and Enable Purchase PIN Lockout options to determine whether PPV services are locked out.

Example: Assume the attributes are set as follows:

- **Invalid Tries** – 3
- **Trial Timer** – 1 minute
- **Lockout Time** – 30 minutes
- **Enable Purchase PIN Lockout** – Enabled

In this case, if a subscriber enters three incorrect PINs within 1 minute, the set-top will lock out PPV services for 30 minutes.

Important: Be sure to enter the same values for both the Purchase PIN Lockout and Blocking PIN Lockout options.

Specify How Many Times a Subscriber Can Try to Enter a Purchase PIN, Continued

Recommended Setting

Set the Invalid tries to 3 tries.

Specifying How Many Times a Subscriber Can Try to Enter a Purchase PIN

To specify how many times a subscriber can try to enter an incorrect purchase PIN within a specified time frame before being locked out from PPV services, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **PIN Entry** tab.
Result: The PIN Entry tab appears in the forefront.
5. Be sure the **Enable Purchase PIN Lockout** field under Purchase PIN is selected.
6. In the **Invalid Tries** field under Purchase PIN, enter the number of times the subscriber can try to enter a purchase PIN before being locked out from PPV services. Typically, the invalid tries field is set to 3 or 4.
7. Click **Save**.
Result: The set-top will allow the subscriber to enter a purchase PIN for the number of times you specified in step 6 within a specified time frame.
8. Click **Cancel**.
Result: The DHCT Configure Prompt opens.
9. Click **File** and **Close** to close the DHCT Configure prompt.

Change the Look of the PPV Screen Background

Introduction

The PPV Screen Background option allows you to change the look of the PPV screen background from the traditional graphical background to a solid-color background. Using a solid-color background requires less set-top memory. A graphical background is the default setting for this option and requires 150 KB of "temporary" or "transitional" memory for the set-top to display this graphical background. To eliminate the need for transitional memory, you can select a solid-color background. The system operator can choose the color for the solid background. The default color is blue.

Recommended Setting

We recommend that you use the default configuration that displays a predefined background image on IPPV/PPV services. For sites that use a lot of applications, we recommend that you select the solid-color background.

Changing the Look of the PPV Screen Background

To change the look of the PPV screen background, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

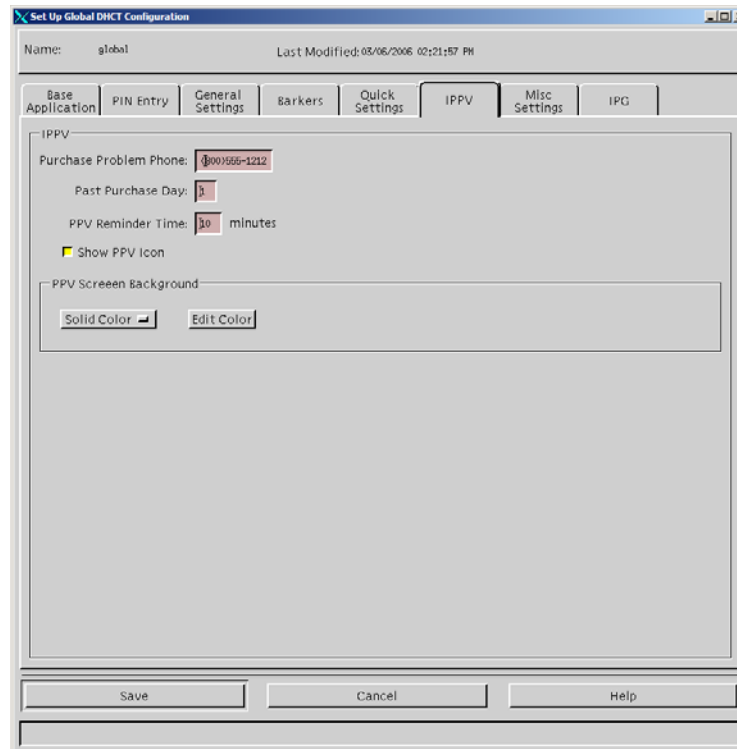
3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

Change the Look of the PPV Screen Background, Continued

4. Select the **IPPV** tab.

Result: The IPPV tab appears in the forefront.



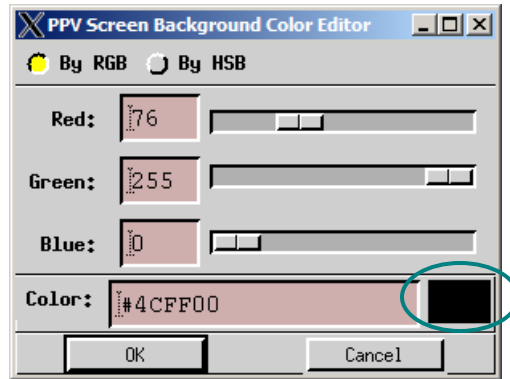
5. For PPV Screen Background, select the background (Graphic or Solid Color) that you want to use as follows:
- If you want to use a graphical background, click **Graphic** and go to step 8.
 - If you want to use a solid-color background, click **Solid Color**.

Result: The Edit Color button becomes active.

Change the Look of the PPV Screen Background, Continued

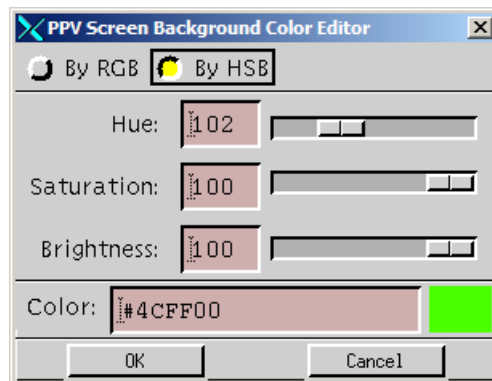
- Click **Edit Color**.

Result: The PPV Screen Background Color Editor opens.



Note: When the PPV Screen Background Color Editor window is initially opened, black is shown in the Color field even though the editor is configured for another color.

- To display the proper color, click **By RGB** or **By HSB** in the PPV Screen Background Color Editor window:



- If you select **By RGB**, enter values for Red, Green, and Blue and click **OK**.
- If you select **By HSB**, enter values for Hue, Saturation, and Brightness and click **OK**.

- Click **Save**.

Result: The background of all PPV screens now use the background that you selected.

- Click **Cancel**.

Result: The DHCT Configure prompt opens.

- Click **File** and **Close** to close the DHCT Configure prompt.

Chapter 12

Power On and Off Options

Overview

Introduction

This chapter describes the configurable options for set-tops relating to how the set-top functions when powered on or off. The following configurable options are available:

- Supplying power to the AC outlet
- Powering on the set-top with numeric keys
- Configuring the RF Bypass

In This Chapter

This chapter contains the following topics.

Topic	See Page
Supply Power to the AC Outlet on the Set-Top	12-2
Power On the Set-Top with Numeric Keys	12-5
Configure the RF Bypass for Displaying Analog Channels While the Set-Top Is Powered Off	12-7

Supply Power to the AC Outlet on the Set-Top

Introduction

The AC Outlet Control option lets you specify whether power is supplied to the AC convenience outlet on the set-top at all times or only when the set-top is powered on. The AC convenience outlet is located on the rear panel of the set-top.

Select one of the following options:

- **On** means that the AC convenience outlet has power at all times.
- **Switched** means that the AC convenience outlet only has power when the set-top is powered on.

Important:

- The procedure in this section covers a global configuration. When you send a global configuration, *all* set-tops in your system are affected.
- If you want to send a configuration to all the set-tops in a hub, see **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1.
- If you want to change a setting for only one Set-Top, see **Send a Configuration to a Single Set-Top** in Chapter 1.
- If you want to set the Staging Defaults, see **Set Staging Defaults** in Chapter 1.

Recommended Setting

Enable the option to allow subscribers to choose whether the AC outlet on the set-top is always on or turns on and off with the set-top.

A Note About DNCS Settings

The parameters for controlling the AC Outlet appear on several different tabs of the DNCS. Policy decisions that you make for Global Defaults affect the options that you will see for Staging Defaults and set-top menus. The main distinction is whether a control is made visible to the subscriber or hidden from the subscriber. For any setting that you hide from the subscriber, the operation is determined by the setting in the Set Up Global DHCT Configuration. For any setting that you make visible to the subscriber, a default must be established in the Setup Staging Defaults windows so that the desired operation occurs for those subscribers who have not accessed these settings.

Supply Power to the AC Outlet on the Set-Top, Continued

Allowing Subscribers to Specify When Power Is Supplied to the AC outlet on the Set-Top

To allow subscribers to specify whether power is supplied to the AC convenience outlet at all times or only when the set-top is powered on, complete the following steps.

Note: If you want to specify when power is supplied to the AC outlet on the set-top, see **Specifying When Power Is Supplied to the AC Outlet on the Set-Top**, next in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.
5. Make sure the option **for AC Outlet Control** is selected.
6. Click **Save**.
7. Click **Cancel**.
Result: The DHCT Configure Prompt window opens.
8. Click **Staging Defaults**.
Result: The Set Up Staging Defaults window opens.
9. Select the **Base Application** tab to select when power is applied to the AC outlet on the set-top for all subscribers.
Result: The Base Application tab appears in the forefront.
10. For the AC Outlet Control field, select one of the following options:
 - **On** means that the AC convenience outlet has power at all times.
 - **Switched** means that the AC convenience outlet only has power when the set-top is powered on.

Note: This field appears on this tab only if **AC Outlet Control** is enabled on the General Settings tab for a Global Configuration.
11. Click **Save**.
Result: Power is supplied to the AC outlet as you specified in step 10. The subscriber can use the General Settings Menu to change the setting.
12. Click **Cancel**.
Result: The DHCT Configure prompt opens.
13. Click **File** and **Close** to close the DHCT Configure prompt.

Supply Power to the AC Outlet on the Set-Top, Continued

Specifying When Power Is Supplied to the AC Outlet on the Set-Top

To specify whether power is supplied to the AC convenience outlet on the rear panel of the set-top at all times or only when the set-top is powered on, complete the following steps.

Note: If you want to allow subscribers to select when power is supplied to the AC convenience outlet on the set-top, see **Allowing Subscribers to Specify When Power Is Supplied to the AC Outlet on the Set-Top**, earlier in this section.

1. On the DNCS Administrative Console, select the **Server Applications** tab.

2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears the forefront.

5. Make sure the option for **AC Outlet Control** is *not* selected.

Result: When this field is *not* selected, subscribers cannot specify when power is supplied to the AC outlet on the set-top. Instead, you select when power is supplied to the outlet for the subscribers.

6. Select the **Base Application** tab to select when power is applied to the AC outlet on the set-top for all subscribers.

Result: The Base Application tab appears in the forefront.

7. For the AC Outlet Control field, select one of the following options:

- **On** means that the AC convenience outlet has power at all times.
- **Switched** means that the AC convenience outlet only has power when the set-top is powered on.

Important: This field appears on this tab only if **AC Outlet Control** is disabled on the General Settings tab.

8. Click **Save**.

Result: Power is supplied to the AC outlet as you specified in step 7.

9. Click **Cancel**.

Result: The DHCT Configure prompt opens.

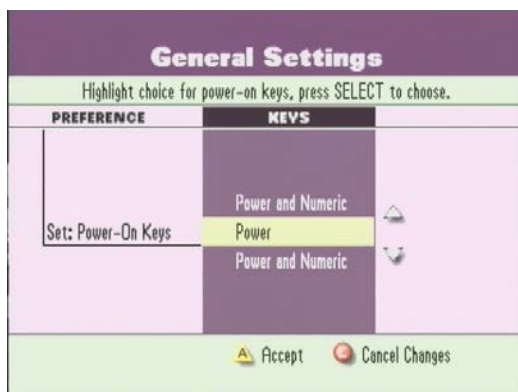
10. Click **File** and **Close** to close the DHCT Configure prompt.

Power On the Set-Top with Numeric Keys

Introduction

The Set: Power-On Keys option allows you to use keys other than the Power key to power on the set-top. The Power and Numeric option enables both the Power key and any numeric key to power on the set-top. The Power option enables only the Power key to power on the set-top. This feature is useful for subscribers using a universal remote control or using a remote with a more complex home theater configuration.

This option as shown in the following illustration *always* appears on the General Settings menu. The system administrator can set a staging default or configure it for a specific set-top. This option is not controlled by a Global configuration.



Important: The procedure in this section covers a staging configuration. When you send a staging configuration, you set the staging default for the set-tops in your system. See **Set Staging Defaults** in Chapter 1. If you want to change a setting for only one Set-Top, see **Send a Configuration to a Single Set-Top** in Chapter 1.

Recommended Setting

We recommend that your subscribers select the Power option.

Allowing Numeric Keys to Power On the Set-Top

To specify whether numeric keys can power on the set-top, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Click **Staging Defaults**.
Result: The Set Up Staging Defaults window opens.
4. Select the **Base Application** tab to select whether numeric keys can be used to power on the set-top.
Result: The Base Application tab appears in the forefront.

Power On the Set-Top with Numeric Keys, Continued

5. Make sure the **Numeric Keys Power-On DHCT** option is selected.
6. Click **Save**.
Result: When subscribers press a numeric key, the set-top will power on and tune to the channel associated with that numeric key.
7. Click **Cancel**.
Result: The DHCT Configure prompt appears.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Configure the RF Bypass for Displaying Analog Channels While the Set-Top Is Powered Off

Introduction

The Bypass When Off option determines whether the RF broadcast signals should bypass the set-top and go directly to the TV when the set-top is powered off. When the Bypass When Off option is enabled, subscribers can watch analog channels even though the set-top is powered off. Without the set-top, subscribers cannot receive digital channels. This function will work *only* on set-tops that have the Bypass switch installed.

Important:

- The procedure in this section covers a global configuration. When you send a global configuration, *all* set-tops in your system are affected.
- If you want to send a configuration to all the set-tops in a hub, see **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1.
- If you want to change a setting for only one Set-Top, see **Send a Configuration to a Single Set-Top** in Chapter 1.
- If you want to set the Staging Defaults, see **Set Staging Defaults** in Chapter 1.

Recommended Setting

Enable this option if you offer the RF bypass switch to your subscribers.

Allowing Subscribers to Watch Analog Channels While the Set-Top Is Powered Off

To allow subscribers to watch analog channels while the set-top is powered off, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.

Configure the RF Bypass for Displaying Analog Channels While the Set-Top Is Powered Off, Continued

5. Make sure the option for **Bypass When Off** is selected. If this option is not selected, this option will not appear in the General Settings menu.

6. Click **Save**.

Result: The General Settings menu of the set-top displays the RF Bypass option. If subscribers enable this option, they can watch analog channels while the set-top is powered off.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Chapter 13

Program Recording Options

Overview

Introduction

Subscribers can use the VCR Commander™ module with the set-top to control VCR programming. The VCR Commander service works with models of the Explorer set-top that have an infrared (IR) port on the back panel. For subscribers who do not have a digital video recorder (DVR) set-top, authorizing the VCR commander service and connecting a VCR commander to the set-top allows them to record current or future programs from the General Settings menu or IPG.

These alternatives eliminate the need to manually program the VCR to record.

Important:

- The procedures in this chapter cover a global configuration. When you send a global configuration, *all* set-tops in your system are affected.
- If you want to send a configuration to all the set-tops in a hub, see **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1.
- If you want to change a setting for only one set-top, see **Send a Configuration to a Single Set-Top** in Chapter 1.
- If you want to set the Staging Defaults, see **Set Staging Defaults** in Chapter 1.

This chapter provides options for configuring the VCR Commander service.

Subscribers who have Explorer set-tops equipped with a Digital Video Recorder (DVR) can record and store between 30 and 50 hours of programs. For information on the configuration options for a DVR, refer to the *DVR and DVD Configuration Guide*.

Note: Because the VCR Commander service is not required to record programs on the DVR, this service is currently not supported on DVR equipped Explorer set-tops.

Overview, Continued

In This Chapter

This chapter contains the following topics.

Topic	See Page
Authorize the VCR Commander Service for Recording Programs	13-3
Prompt Subscribers to Order the VCR Commander Service	13-5
Show VCR Commander Options	13-6
Allow Subscribers to Record Programs with the VCR Commander Service	13-7
Allow Subscribers to Record a Currently Tuned Program	13-8
Allow Subscribers to Record Blocked Channels with the VCR Commander Service	13-9

Authorize the VCR Commander Service for Recording Programs

Introduction

The Allow VCR Commander Authorization by Package option lets you specify whether the VCR Commander feature is available to all subscribers who have a VCR Commander module. If you enable this option, then the set-tops must be authorized for a specific package to use the VCR Commander service. You must select the name of the package that is required to authorize the set-top. If you do not enable this option, then any subscriber who has a VCR Commander module can use it to record programs.

Note: Because the VCR Commander service is not required to record programs on the DVR, this service is not supported on DVR equipped Explorer set-tops.

Recommended Setting

Enable this option if you want to use a package to authorize the VCR Commander service. Subscribers must pay for a service that requires a package to authorize it.

Create a Package for the VCR Commander Service

To allow subscribers to access the VCR Commander service, you must create a package, if one does not already exist. Refer to the online Help on the DNCS for instructions.

Authorizing the VCR Commander Service for Recording Programs

To authorize the VCR Commander service for recording programs, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **Base Application** tab.
Result: The Base Application tab appears in the forefront.
5. Make sure the **Allow VCR Commander Authorization by Package** field is selected.
6. In the Package Name field, do the following:
 - Select **None** if you want all subscribers who have a VCR Commander module to be able to record programs.
 - Select a package name to authorize the set-top to record the program.

Authorize the VCR Commander Service for Recording Programs, Continued

7. Click **Save**.

Result: Subscribers can record programs with the VCR Commander service as you specified in step 6.

8. Click **Cancel**.

Result: The DHCT Configure prompt opens.

9. Click **File** and **Close** to close the DHCT Configure prompt.

Prompt Subscribers to Order the VCR Commander Service

Introduction

The Order VCR Commander Barker option lets you display a VCR Commander barker under the following conditions:

- When a subscriber tries to record a program on the set-top without setting up a VCR Commander service
- When the subscriber does not have authorization for a VCR Commander service

The VCR Commander barker does not prevent recording. Instead, the barker informs subscribers that they can order a VCR Commander service. It also instructs subscribers to start the VCR recording manually and explains where to tune the VCR.

Note: Because the VCR Commander service is not required to record programs on the DVR, this service is not supported on DVR equipped Explorer set-tops.

Recommended Setting

Enable this option to display the barker.

Prompting Subscribers to Order the VCR Commander Service

To prompt subscribers to order the VCR Commander service, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **Misc Settings** tab.

Result: The Misc Settings tab appears in the forefront.

5. Make sure the **Order VCR Commander Barker** field is selected.

6. Click **Save**.

Result: Subscribers are prompted to order the VCR Commander service when they have not yet set up the VCR Commander service or they are not authorized for the service.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Show VCR Commander Options

Introduction

The VCR Commander Menu option lets you specify whether all set-tops or only specific set-tops can show VCR Commander options on the General Settings menu. Select one of the following options:

- **Addressable** means that only specific set-tops can show the VCR Commander options on the General Settings menu
- **Global** means that all set-tops can show the VCR Commander options on the General Settings menu.

Note: Because the VCR Commander service is not required to record programs on the DVR, this service is not supported on DVR equipped Explorer set-tops.

Recommended Setting

Allow only specific set-tops to show the VCR Commander options on the General Settings menu. Choose the **Addressable** setting.

Showing VCR Commander Options

To specify whether all set-tops or only specific set-tops are able to show VCR Commander options on the General Settings menu, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **General Settings** tab.
Result: The General Settings tab appears in the forefront.
5. For the **VCR Commander Menu Option** field, select one of the following options:
 - **Addressable** means that only specific set-tops can show the VCR Commander options on the General Settings menu. To use the addressable setting, you need to define a VCR commander package or use an existing package to authorize the VCR Commander feature.
 - **Global** means that all set-tops can show and hide the VCR Commander General Settings options.
6. Click **Save**.
Result: The VCR Commander options appear on the General Settings menu of the selected set-tops.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Allow Subscribers to Record Programs with the VCR Commander Service

Introduction

The VCR Commander option lets you specify whether subscribers can use the VCR Commander feature with the set-top to record programs. If you do not enable this option, subscribers cannot record programs with the VCR Commander service.

Note: This option only provides the VCR Commander feature to subscribers who have a VCR Commander module installed on the set-top. Because the VCR Commander service is not required to record programs on the DVR, this service is not supported on DVR-equipped Explorer set-tops.

Recommended Setting

Enable this option if you want to allow subscribers to record programs with the VCR Commander service.

Recording Programs with the VCR Commander Service

To specify whether subscribers can use the VCR Commander feature with the set-top to record programs, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.

2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.

5. Make sure the **VCR Commander** field is selected.

6. Click **Save**.

Result: Subscribers who have a VCR Commander module installed on the set-top can use the VCR Commander feature to record programs.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Allow Subscribers to Record a Currently Tuned Program

Introduction

The Has Record option allows subscribers to record a currently tuned program using the Quick Settings menu on the set-top. Depending upon the type of Explorer set-top the subscriber is using, the Quick Settings menu option for recording programs will behave slightly different. When the subscriber selects **Start Recording Now** on the Quick Settings menu, the set-tops behave as follows:

- A set-top equipped with a VCR Commander, displays the Recording Alert screen.
- A set-top equipped with a DVR, displays a Confirm Recording screen.

Recommended Setting

Enable this option to allow subscribers to record the currently tuned program from the Quick Settings menu.

Recording a Currently Tuned Program

To allow subscribers to record a currently tuned program, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.

2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **Quick Settings** tab.

Result: The Quick Settings tab appears in the forefront.

5. Make sure the option for **Has Record** is selected.

Result: Subscribers can record the currently tuned program by selecting this option from the Quick Settings menu.

Note: If this field is not enabled, the Quick Settings menu does not contain an option to record the current program.

6. Click **Save**.

Result: The Quick Settings menu displays the option to record a program.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Allow Subscribers to Record Blocked Channels with the VCR Commander Service

Introduction

The Record Blocked Channel option lets you specify whether subscribers can record blocked channels without manually unblocking them. If this option is enabled, subscribers can record blocked channels without unblocking them. If you do not enable this option, subscribers must unblock a channel with the Parental Control features before they can record it with the VCR Commander service.

Note: The DVR does not support the VCR Commander service. The DVR service records any channels or rated programs that the subscriber blocked in General Settings. When the subscriber tries to play back the recording, the DVR will ask for a PIN.

Recommended Setting

Enable this option if you want to allow subscribers to record blocked channels without manually unblocking them.

Recording Blocked Channels with the VCR Commander Service

To allow subscribers to record blocked channels without manually unblocking them, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **Misc Settings** tab.
Result: The Misc Settings tab appears in the forefront.
5. Make sure the **Record Blocked Channels** field is selected.
6. Click **Save**.
Result: Subscribers can record blocked channels without manually unblocking them.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Chapter 14

Remote Control Options

Overview

Introduction

To enjoy many of the features of digital cable, subscribers use their remote controls to access their services. By configuring how the set-top responds to some of the keys on the remote control, you can provide your subscribers with direct access to some of the services that you offer. This chapter covers how to configure the set-top to launch a service or a third-party application) when specific keys on the remote control are pressed.

In This Chapter

This chapter contains the following topics.

Topic	See Page
Configure the Set-Top to Launch Services from the Remote Control	14-2

Configure the Set-Top to Launch Services from the Remote Control

Introduction

System operators can now configure certain keys on the remote control to activate a service. The following keys can be configured to launch a service:

- A
- B
- Guide
- Menu
- Power
- PPV

You can configure the set-top to respond to these key presses when a subscriber is using a Cisco remote control or a compatible non-Cisco universal remote control. The instructions in this section provide procedures for configuring the set-top to respond to these keys in order to launch a service or application.

Recommendations for Configuring Remote Control Keys to Launch Services

The instructions in this section simply describe the steps needed to create a service and to identify a service that will be launched when a particular key is pressed. For details about the other options that need to be set for a service being launched in this manner, work with your application provider. If you have questions about how multiple services interact with each other, contact Cisco and your application providers.

Note: This feature will not change the channel to launch a channel-based service. This feature launches the specified service on the currently tuned channel. If the application is not coded to handle being launched as a non-channel-based service, then unexpected behavior could occur.

Configure the Set-Top to Launch Services from the Remote Control, Continued

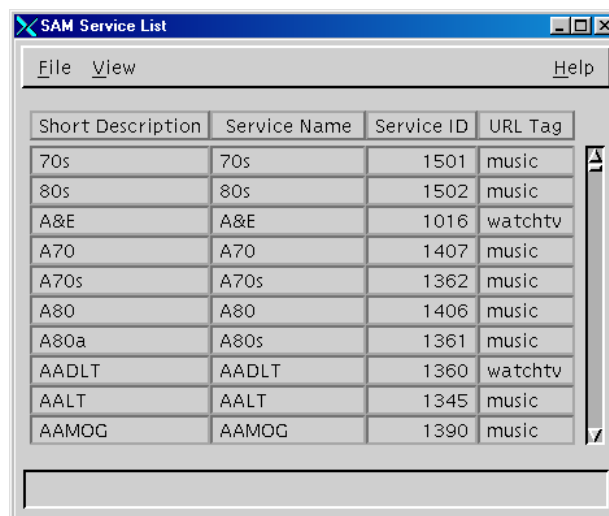
Configuring the Set-Top to Launch Services from the Remote Control

Complete these instructions to configure the A, B, Guide, Menu, Power, or PPV key to launch a service.

Note: The URL for this SAM service will point to the application or service that will be launched. An application that registers in the set-top indicating that it takes advantage of the key will take precedence over the service the key should launch. As a result, the operation of the key may seem inconsistent when used to launch a service.

1. On the DNCS Administrative Console, click the **Application Interface Modules** tab.
2. Click **SAM Service**.

Result: The SAM Service List window opens.



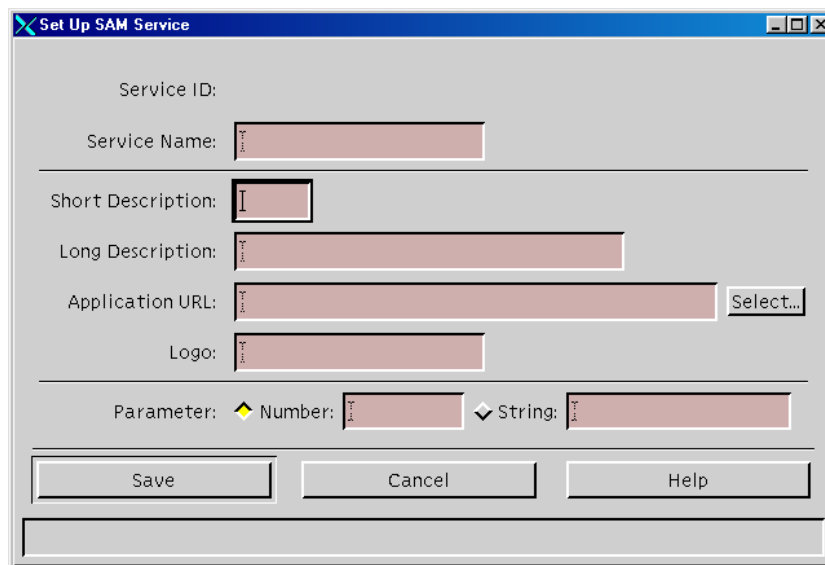
The screenshot shows a window titled "SAM Service List" with a menu bar containing "File", "View", and "Help". Below the menu bar is a table with four columns: "Short Description", "Service Name", "Service ID", and "URL Tag". The table contains ten rows of service data. A vertical scrollbar is visible on the right side of the table.

Short Description	Service Name	Service ID	URL Tag
70s	70s	1501	music
80s	80s	1502	music
A&E	A&E	1016	watchtv
A70	A70	1407	music
A70s	A70s	1362	music
A80	A80	1406	music
A80a	A80s	1361	music
AADLT	AADLT	1360	watchtv
AALT	AALT	1345	music
AAMOG	AAMOG	1390	music

Configure the Set-Top to Launch Services from the Remote Control, Continued

3. Click **File** and then select **New**.

Result: The Set Up SAM Service window opens.



4. Click in the Service Name field and type the following commands depending upon the key you want to use to launch a service:
 - **_KEYA** to configure the A key. There is no default service associated with the A key.
 - **_KEYB** to configure the B key. There is no default service associated with the B key.
 - **_GUID** to configure the GUIDE key. The Interactive Program Guide is the default screen that appears if you do not configure the GUIDE key to launch a particular service.
 - **_MENU** to configure the MENU key. The Interactive Program Guide is the default screen that appears if you do not configure the MENU key to launch a particular service.
 - **_POWR** to configure the POWER key. The default behavior for the Power key is to turn the set-top on and off. When you configure the POWER key to launch an application, it will power on the set-top and launch the application that you specify.
 - **_PPVB** to configure the PPV key. Some remote controls, including the AllTouch® AT8400™ Remote Control, use the * (asterisk) key in place of the PPV key. On those systems, the * key functions the same as the PPV key. There is no default action associated with the PPV key when the PPV key is not specially configured.

Configure the Set-Top to Launch Services from the Remote Control, Continued

5. Click in the Short Description field and type a corresponding short description as follows:
 - **_KEYA** for the A key
 - **_KEYB** for the B key
 - **_GUID** for the GUIDE key
 - **_MENU** for the MENU key
 - **_POWER** for the POWER key
 - **_PPVB** for the PPV key
6. Click in the Long Description field and enter anything you want. This field is not otherwise used. You can enter up to 32 alphanumeric characters.

Note: This long description is for your benefit only. Subscribers will not see this information.
7. Click in the Application URL field, and then type the URL address for the specific application that you want to launch.

Note: If the application has already been added at the headend, you can click **Select** to select the correct URL address from the list.
8. Click **OK**.

Result: The selected application URL appears in the Application URL field in the Set Up SAM Service window.
9. In the Logo field, type **0** for no logo.
10. In the Parameter area, click the *either* the **Number** or **String** option, according to the needs of the service. (The string option is a set of variables that are unique to the application.) Then, click in the associated field and type the parameter number or string used by the specific application that you desire to set up for the key.

Configure the Set-Top to Launch Services from the Remote Control, Continued

11. Click **Save**.

Results:

- The system saves the service information in the DNCS database and closes the Set Up SAM Service window.
 - The SAM Service List window updates to include the new service with its system-assigned service ID and application URL tag.
12. Click **File**, and then select **Close** to close the SAM Service List window and to return to the DNCS Administrative Console. Refer to **SAM Service Updates** in the **Overview** section of Chapter 1 to make sure the service took effect.
 13. Test the key you have configured by pressing the appropriate key to verify that it launches the service you configured it to launch.
 14. Did the correct service appear?
 - If **yes**, you have successfully configured the key
 - If **no**, call Cisco Services for assistance.

Chapter 15

Service Authorization Options

Overview

Introduction

To enjoy many of the features of digital cable, subscribers must be authorized for the service. This chapter covers the options that you can configure for authorizing services.

Important:

- The procedures in this chapter cover a global configuration. When you send a global configuration, *all* set-tops in your system are affected.
- If you want to send a configuration to all the set-tops in a hub, see **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1.
- If you want to change a setting for only one set-top, see **Send a Configuration to a Single Set-Top** in Chapter 1.
- If you want to set the Staging Defaults, see **Set Staging Defaults** in Chapter 1.

In This Chapter

This chapter contains the following topics.

Topic	See Page
Enable Brick Mode for Unauthorized Set-Tops	15-2
Provide a Phone Number for Ordering Services	15-4
Provide a Phone Number When the Set-Top is Unauthorized for Service	15-5
Enable Auto Diagnostics for Unauthorized Set-Tops	15-6

Enable Brick Mode for Unauthorized Set-Tops

Introduction

The Allow Service Disconnect (Brick mode) option lets you specify whether to disable set-tops that are not authorized for the Brick Mode Avoidance package. If the set-top is not authorized for this package, then the set-top goes into “Brick mode,” which means the set-top is out of service. When a set-top goes into Brick mode, the system responds with the following outcome:

- An Out of Service barker appears on the screen.
- The set-top does not respond to the front panel or remote control keys.

Note: If you select this option, you must enter the name of the package that is required to authorize the set-top.

The set-top must be re-authorized for the Brick Mode Avoidance Package in order to function. Use **Disconnect Barker Phone** on the Barkers tab to specify the phone number that subscribers should call to clear the Brick mode and make the set-top usable again.

Recommended Setting

Enable this option to use a Brick Mode Avoidance package to authorize set-tops.

Create a Brick Mode Avoidance Package

To authorize set-tops with a package, you must create a Brick Mode Avoidance package. Refer to the online Help on the DNCS for instructions.

Disabling Unauthorized Set-Tops

To disable unauthorized set-tops, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **Base Application** tab.

Result: The Base Application tab appears in the forefront.

Enable Brick Mode for Unauthorized Set-Tops, Continued

5. Make sure the **Allow Service Disconnect (Brick mode)** option is selected.
6. In the Package Name field, enter the name of the package that is required to authorize the set-top.
7. Click **Save**.
Result: Set-tops that are not authorized for the package you selected in step 6 are disabled.
8. Click **Cancel**.
Result: The DHCT Configure prompt opens.
9. Click **File** and **Close** to close the DHCT Configure prompt.

Provide a Phone Number for Ordering Services

Introduction

The Not Authorized Phone option lets you provide a phone number that displays on a barker when subscribers tune to a channel that is not authorized. Subscribers can call this phone number to order the channel, if they wish.

Important: If you want to provide a unique phone number for each hub, you can enable this feature and send a hub-specific configuration to the set-tops in that specific hub.

Recommended Setting

Enable this option to display the Customer Service Number on a barker when subscribers tune to an unauthorized channel.

Providing a Phone Number for Ordering Services

To provide a phone number that displays on a barker when subscribers tune to a channel that is not authorized, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **Barkers** tab.
Result: The Barkers tab appears in the forefront.
5. In the **Not Authorized Phone** field, enter the number that you want to appear on a barker when subscribers tune to an unauthorized channel.
6. Click **Save**.
Result: The phone number that you entered in step 5 appears when subscribers tune to an unauthorized channel.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Provide a Phone Number When the Set-Top is Unauthorized for Service

Introduction

The Disconnect Barker Phone option lets you provide a phone number that appears on a barker for a set-top that is in Brick mode. If the set-top is in Brick mode, the following results occur:

- An Out of Service barker appears.
- The set-top does not respond to the front panel or remote control key.
- The set-top displays four dashes (- - -) on the front panel of the set-top to indicate that the set-top is not authorized for the “brick mode avoidance” package. For set-tops with only POWER LED indicators, the POWER LED indicator blinks eight times and then pauses for half a second.

For the Brick Mode Avoidance package to function again, the set-top must be authorized.

Recommended Setting

Enable this option to display a Customer Service Number on a barker when a set-top is in Brick mode.

Providing a Phone Number When the Set-Top is Unauthorized

To provide a phone number that appears on a barker for a set-top that is in Brick mode, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **Barkers** tab.

Result: The Barkers tab appears in the forefront.

5. In the **Disconnect Barker Phone** field, enter the number that you want to appear when the set-top is in Brick mode.

6. Click **Save**.

Result: The phone number that you entered in step 5 appears when the set-top is in Brick mode.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt .

Enable Auto Diagnostics for Unauthorized Set-Tops

Introduction

The Enable Auto Diagnostics option lets you specify whether the set-top launches the diagnostics screens automatically when an unauthorized set-top is powered on. This behavior only occurs if the set-top is not authorized (in brick mode). The set-top will do this only *once*.. When you enable this feature, if the subscriber powers on a set-top that is in brick mode, then the set-top displays the diagnostics screens and clears the auto-diag flag. On subsequent reboots or when the set-top is powered on again, the set-top will *not* show the diagnostic screens. Also, if the set-top has not been staged and you enable auto diagnostics in the staging defaults, then the set-top should also display the diagnostics screens automatically when powered on, but again, only once.

Recommended Setting

Enable this option if you are staging set-tops on a rack of set-tops so that you do not have to press any keys to launch the diagnostics before you send the set-top to a home. You could also enable this option if a site stages set-tops in the home. Enabling this option would save the installer some time from having to launch the diagnostics to check the status of various settings as it boots for the first time.

Enabling Auto Diagnostics

To enable the auto diagnostics feature, complete the following steps.

Note: The Enable Auto Diagnostics option is also available on the Set Up Addressable DHCT Configuration screen.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Staging Defaults**.

Result: The Set Up Staging Defaults window opens.

4. Select the **Base Application** tab.

Result: The Base Application tab appears in the forefront.

5. Make sure the option for **Enable Auto Diagnostics** is selected.

6. Click **Save**.

Result: The diagnostics screens will appear automatically when the set-top is powered on if the set-top is in brick mode and the auto-diag flag is clear.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Chapter 16

Timer Options

Overview

Introduction

Subscribers can set timers to remind them about programs or PPV events that are about to begin or to indicate when to record a program. This chapter provides the options you can set for Timers to best suit your subscribers.

Important:

- The procedures in this chapter cover a global configuration. When you send a global configuration, *all* set-tops in your system are affected.
- If you want to send a configuration to all the set-tops in a hub, see **Build and Send a Configuration to All Set-Tops in a Single Hub** in Chapter 1.
- If you want to change a setting for only one set-top, see **Send a Configuration to a Single Set-Top** in Chapter 1.
- If you want to set the Staging Defaults, see **Set Staging Defaults** in Chapter 1.

In This Chapter

This chapter contains the following topics.

Topic	See Page
Set Timers on the Set-Top	16-2
Use the Numeric Keys on the Remote Control to Set Timers and Block by Time Values	16-3
Access the Sleep Timer From the Quick Settings Menu	16-4
Specify When to Remind Subscribers That a PPV Event Is About to Begin	16-5

Set Timers on the Set-Top

Introduction

The **Timer: All** option lets you specify whether subscribers can set timers on the set-top. If this option is enabled, the General Settings menu lets subscribers set various timers such as Wake Up, Power Off, VCR, Reminder, and Sleep timers.

Recommended Setting

Enable this option to allow subscribers to set timers on the set-top.

Setting Times on the Set-Top

To allow subscribers to set timers on the set-top, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.

2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.

5. Make sure the option for **Timer:All** is selected.

6. Click **Save**.

Result: Subscribers can use the General Settings menu to set various timers such as Wake Up, Power Off, VCR New, Reminder, and Sleep.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt .

Use the Numeric Keys on the Remote Control to Set Timers and Block by Time Values

Introduction

The Numeric Key Sets Times option allows subscribers to use the numeric keys on the remote control to set timers in the General Settings menu or to enter values for blocking by time. If you do not enable this option, subscribers must scroll through the numbers on the screen to set the time.

Note: If you enable this feature, we recommend that you also enable the **Numeric Key Chooses Channel** option.

Recommended Setting

Enable this option to allow subscribers to use the numeric keys on the remote control to set timers in the General Settings menu.

Using the Numeric Keys on the Remote Control to Set Timers

To allow subscribers to use the numeric keys on the remote control to set timers, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.

2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **General Settings** tab.

Result: The General Settings tab appears in the forefront.

5. Make sure the option for **Numeric Key Sets Times** is selected.

6. Click **Save**.

Result: Subscribers can use the numeric keys on the remote control to set timers in the General Settings menu for the set-top or to set values for blocking by time.

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Access the Sleep Timer From the Quick Settings Menu

Introduction

The Has Sleep Timer option allows subscribers to access the Sleep Timer from the Quick Settings menu. The Sleep Timer allows a subscriber to set a timer to automatically turn off the TV after a specified period of time (such as 30 or 60 minutes).

If this option is not enabled, the Quick Settings menu does not contain an option to turn on the Sleep Timer. However, this option will be available in the General Settings menu if the Timer:All option has been enabled.

Recommended Setting

Enable this option to allow subscribers to activate the Sleep Timer from the Quick Settings menu.

Accessing the Sleep Timer From the Quick Settings Menu

To allow subscribers to access the Sleep Timer from the Quick Settings menu, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.

2. Click **DHCT Config**.

Result: The DHCT Configure Prompt window opens.

3. Select **Global**.

Result: The Set Up Global DHCT Configuration window opens.

4. Select the **Quick Settings** tab.

Result: The Quick Settings tab appears in the forefront.

5. Make sure the option for **Has Sleep Timer** is selected.

6. Click **Save**.

Result: Subscribers can access the Sleep Timer from the Quick Settings menu. The Sleep Timer allows subscribers to set a timer to automatically turn off the TV after a specified period of time (such as 30 or 60 minutes).

7. Click **Cancel**.

Result: The DHCT Configure prompt opens.

8. Click **File** and **Close** to close the DHCT Configure prompt.

Specify When to Remind Subscribers That a PPV Event Is About to Begin

Introduction

The PPV Reminder Time option lets you specify how long (in minutes) before an event begins that a message appears to remind subscribers that an event they have purchased is about to begin. Typically, this value is set to 5 minutes.

Recommended Setting

Set the reminder time to 5 minutes.

Specifying When to Remind Subscribers that a PPV Event Is About to Begin

To specify when to remind subscribers that a PPV Event is about to begin, complete the following steps.

1. On the DNCS Administrative Console, select the **Server Applications** tab.
2. Click **DHCT Config**.
Result: The DHCT Configure Prompt window opens.
3. Select **Global**.
Result: The Set Up Global DHCT Configuration window opens.
4. Select the **IPPV** tab.
Result: The IPPV tab appears in the forefront.
5. In the **PPV Reminder Time** field, type how long (in minutes) before an event begins that you want a reminder message to appear that a PPV event is about to begin.
6. Click **Save**.
Result: At the time you specified in step 5, a reminder message will appear alerting subscribers that a PPV event is about to begin.
7. Click **Cancel**.
Result: The DHCT Configure prompt opens.
8. Click **File** and **Close** to close the DHCT Configure prompt.

Appendix A

EID Conversion Table

Overview

Introduction

The Entitlement ID (EID) allows you to control whether subscribers are authorized for a service. When you create a package, the system displays the EID in hexadecimal. To use the EID as part of a SAM service to authorize a service, you must enter the EID as a “decimal” value. Use the conversion table in this appendix to convert the EID to a decimal value.

In This Appendix

This appendix contains the following topic.

Topic	See Page
Convert a Package EID to Decimal	A-2

Convert a Package EID to Decimal

Converting a Package EID to Decimal

After you determine the package EID, use the following table to locate the EID in the **HEX** column. Then, locate the corresponding decimal value in the **DEC** column. For example, if the package EID is **1f**, the decimal value is **31**.

Record the decimal value for the package EID here ____.

HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC	HEX	DEC
0	0	20	32	40	64	60	96	80	128	a0	160	c0	192	e0	224
1	1	21	33	41	65	61	97	81	129	a1	161	c1	193	e1	225
2	2	22	34	42	66	62	98	82	130	a2	162	c2	194	e2	226
3	3	23	35	43	67	63	99	83	131	a3	163	c3	195	e3	227
4	4	24	36	44	68	64	100	84	132	a4	164	c4	196	e4	228
5	5	25	37	45	69	65	101	85	133	a5	165	c5	197	e5	229
6	6	26	38	46	70	66	102	86	134	a6	166	c6	198	e6	230
7	7	27	39	47	71	67	103	87	135	a7	167	c7	199	e7	231
8	8	28	40	48	72	68	104	88	136	a8	168	c8	200	e8	232
9	9	29	41	49	73	69	105	89	137	a9	169	c9	201	e9	233
a	10	2a	42	4a	74	6a	106	8a	138	aa	170	ca	202	ea	234
b	11	2b	43	4b	75	6b	107	8b	139	ab	171	cb	203	eb	235
c	12	2c	44	4c	76	6c	108	8c	140	ac	172	cc	204	ec	236
d	13	2d	45	4d	77	6d	109	8d	141	ad	173	cd	205	ed	237
e	14	2e	46	4e	78	6e	110	8e	142	ae	174	ce	206	ee	238
f	15	2f	47	4f	79	6f	111	8f	143	af	175	cf	207	ef	239
10	16	30	48	50	80	70	112	90	144	b0	176	d0	208	f0	240
11	17	31	49	51	81	71	113	91	145	b1	177	d1	209	f1	241
12	18	32	50	52	82	72	114	92	146	b2	178	d2	210	f2	242
13	19	33	51	53	83	73	115	93	147	b3	179	d3	211	f3	243
14	20	34	52	54	84	74	116	94	148	b4	180	d4	212	f4	244
15	21	35	53	55	85	75	117	95	149	b5	181	d5	213	f5	245
16	22	36	54	56	86	76	118	96	150	b6	182	d6	214	f6	246
17	23	37	55	57	87	77	119	97	151	b7	183	d7	215	f7	247
18	24	38	56	58	88	78	120	98	152	b8	184	d8	216	f8	248
19	25	39	57	59	89	79	121	99	153	b9	185	d9	217	f9	249
1a	26	3a	58	5a	90	7a	122	9a	154	ba	186	da	218	fa	250
1b	27	3b	59	5b	91	7b	123	9b	155	bb	187	db	219	fb	251
1c	28	3c	60	5c	92	7c	124	9c	156	bc	188	dc	220	fc	252
1d	29	3d	61	5d	93	7d	125	9d	157	bd	189	dd	221	fd	253
1e	30	3e	62	5e	94	7e	126	9e	158	be	190	de	222	fe	254
1f	31	3f	63	5f	95	7f	127	9f	159	bf	191	df	223	ff	255

Appendix B

Configuration Forms

Overview

Introduction

This Appendix provides the detailed list of all the Quick and General Settings available for your set-top. A form that you can fill out to record the configuration that you chose for your system is also provided.

In This Appendix

This appendix contains the following topic.

Topic	See Page
Quick Settings and General Settings	B-2
Record Your Configuration	B-4

Quick Settings and General Settings

Introduction

Your system administrator determines the options that will appear on the Quick Settings menu and on the General Settings menu. Use the following lists to identify what is available to your subscribers.

Quick Settings Options

Check off the options that your subscribers have available on the Quick Settings menu. Options that are checked always appear on the Quick Settings menu.

- ☒ Picture Size (HD Set-Tops Only)
- ☒ Caption Off/On/On with Mute (HD Set-Tops Only)
- ☐ Enable SAP
- ☐ Start Recording Now
- ☐ Set Sleep Timer
- ☐ Add to Favorites List
- ☐ Block this Channel
- ☐ Turn Off Parental Control

Quick Settings and General Settings, Continued

General Settings Options

Check off the options that your subscribers have available on the General Settings menu. Options that are checked always appear on the General Settings menu.

☒ Block: Channel	☐ Audio: Digital Out
☒ Block: PIN	☐ Audio: Range
☒ CC: Background	☐ Audio: Volume Control
☒ CC: Characters	☐ Block: Rating
☒ CC: Options	☐ Block: Time New
☒ CC: Source	☐ Display: Power Off
☒ Purchase: PIN	☐ Display: Power On
☒ PPV: Purchases	☐ Language: Audio
☒ Set: Power-On Keys	☐ Language: Keyboard
☒ Timer: All	☐ Language: Screen
☒ Timer: Remind New	☐ Set: AC Outlet
☒ Timer: Sleep	☐ Set: Color Scheme
☒ Timer: Turn Off	☐ Set: Output Channel
☒ Timer: VCR New	☐ Set: Picture Format
☒ Timer: Wake Up	☐ Set: TV Borders
☒ Viewer: Favorites	☐ Viewer: Power On

Record Your Configuration

Introduction

This section provides a form you can fill out to record the configuration you chose for your system.

Form

Complete this form to record your configuration.

Audio Options	
Language: Audio	☐ Enabled ☐ Disabled
Audio: Digital Output	☐ Enabled ☐ Disabled
Audio: Range	☐ Enabled ☐ Disabled
Audio: Volume Control	☐ Enabled ☐ Disabled
Has SAP (Secondary Audio Program)	☐ Enabled ☐ Disabled
Disable audio and video synchronization	☐ Add the NOAVSYNC Flag ☐ Do not add the NOAVSYNC Flag
Keyboard Language	Use language most common to your area.
Show Volume on LEDs During Update	☐ Enabled ☐ Disabled
Channel Selection Options	
Invalid Numeric Entry Chooses Next Highest Channel	☐ Enabled ☐ Disabled
Skip Unauthorized Channels	☐ Enabled ☐ Disabled
Power On Channel	☐ Enabled ☐ Disabled

Record Your Configuration, Continued

Channel Selection Options, continued	
Number of Digit Entry	☐ 3 ☐ 4
RF Output Channel	☐ Enabled ☐ Disabled
LAST Key Uses Channel Up/Down	☐ Enabled ☐ Disabled
Has Favorite	☐ Enabled ☐ Disabled
Set Up Dual Sources	☐ Add the CCCM_SRC Flag ☐ Do not add the CCCM_SRC Flag
Hide Services from CableCARD Hosts	☐ Add the NO_CCCM Flag ☐ Do not add the NO_CCCM Flag
Front Panel Selection Options	
Display Power Off	☐ Enabled ☐ Disabled
LED Channel Switch	☐ Enabled ☐ Disabled
Enable PIN on LEDs	☐ Enabled ☐ Disabled
Number of LED Digits	☐ 1 ☐ 3 ☐ 2 ☐ 4
Interactive Program Guide Options	
Show C button	☐ Enabled ☐ Disabled
Show Tuned Channel Banner	☐ Enabled ☐ Disabled
SETTINGS Key from the IPG	☐ Display the Quick Setting Menu ☐ Display the General Setting Menu

Record Your Configuration, Continued

Interactive Program Guide Options, continued	
Show PPV Icon	☐ Enabled ☐ Disabled
Browse by	☐ Show the information in the IPG by time ☐ Show the information in the IPG by title or theme
Display "Browse by" menu	☐ Enabled ☐ Disabled
IPG scrolls	☐ 10 Minutes ☐ 30 Minutes
Numeric Key Response	☐ Switch to Time View, highlight channel ☐ Exit IPG, tune to channel
Adjust how set-tops use memory	☐ Use defaults ☐ Customize
Allow IPG Authorization By Package	☐ Enabled ☐ Disabled
High-Definition Options	
Identify Services as HD	☐ Add the ;HD flag ☐ Do not add the ;HD flag
Logo Options	
MSO Logo Position	☐ Left or Right ☐ Do not use a logo

Record Your Configuration, Continued

Look, Feel, and Navigation Options	
Color Scheme	☐ Enabled ☐ Disabled
Numeric Key Chooses Channel	☐ Enabled ☐ Disabled
Language:Screen	☐ Enabled ☐ Disabled
Channel Changing from the Scaled Video	☐ Create a _QTR SAM service ☐ Do not create a _QTR SAM service
Music Channel Options	
Music Screen Saver	☐ Use any screed saver option except -none- ☐ Use -none-
Display Text Along with Music Data	☐ Enabled ☐ Disabled
Parental Control Options	
Blocked Barker Allows Restricted Unblocking	☐ Enabled ☐ Disabled
Block:Rating	☐ Enabled ☐ Disabled
Block:Time	☐ Enabled ☐ Disabled
Has Block This Channel	☐ Enabled ☐ Disabled
Has Blocking	☐ Enabled ☐ Disabled
Blocked Channel Number	☐ Select the Channel Number(s) option ☐ Select None

Record Your Configuration, Continued

Parental Control Options, continued	
Block Programs Rated	☐ Enabled ☐ Disabled
Block Titles	☐ Enabled ☐ Disabled
Enable Blocking PIN Lockout	☐ Enabled ☐ Disabled
Blocking PIN Trial Timer	☐ 10 Minutes ☐ 2 Hours
Blocking PIN Invalid Tries	☐ 3 Tries ☐ 2 Tries
Blocking PIN Lockout Time	☐ 10 Minutes ☐ 30 Minutes
PIN Call Number	Use the Customer Service phone number
Pay-Per-View and Impulse Pay-Per-View Options	
Purchase Problem Phone	Use the Customer Service phone number
Past Purchase Day	☐ Use the <i>first</i> day of the billing cycle ☐ Use the <i>last</i> day of the billing cycle
Enable Purchase PIN Lockout	☐ Enabled ☐ Disabled
Purchase PIN Lockout Time	☐ 10 Minutes ☐ 30 Minutes
Purchase PIN Trial Timer	☐ 10 Minutes ☐ 30 Minutes
Purchase PIN Invalid Tries	☐ 3 Tries ☐ 2 Tries
PPV Screen Background	☐ Graphic ☐ Solid Color

Record Your Configuration, Continued

Power On and Off Options	
AC Outlet Control	☐ Enabled ☐ Disabled
Set-Top Power- On Keys	☐ Enabled ☐ Disabled
Bypass When Off	☐ Enabled ☐ Disabled
Program Recording Options	
Allow VCR Commander Authorization by Package	☐ Enabled ☐ Disabled
Order VCR Commander Barker	☐ Enabled ☐ Disabled
VCR Commander menu	☐ Choose Addressable ☐ Choose Global
VCR Commander	☐ Enabled ☐ Disabled
Has Record	☐ Enabled ☐ Disabled
Record Blocked Channels	☐ Enabled ☐ Disabled

Record Your Configuration, Continued

Remote Control Options	
Configure How the Set-Top Responds to the A Key	☐ Create a _KEYA SAM service ☐ Do not create a _KEYA SAM service
Configure How the Set-Top Responds to the B Key	☐ Create a _KEYB SAM service ☐ Do not create a _KEYB SAM service
Configure How the Set-Top Responds to the GUIDE Key	☐ Create a _GUID SAM service ☐ Do not create a _GUID SAM service
Configure How the Set-Top Responds to the MENU Key	☐ Create a _MENU SAM service ☐ Do not create a _MENU SAM service
Configure How the Set-Top Responds to the POWER Key	☐ Create a _POWR SAM service ☐ Do not create a _POWR SAM service
Configure How the Set-Top Responds to the PPV Key	☐ Create a _PPVB SAM service ☐ Do not create a _PPVB SAM service
Service Authorization Options	
Allow Service Disconnect (Brick mode)	☐ Enabled ☐ Disabled
Not Authorized Phone	☐ Enabled ☐ Disabled
Disconnect Barker Phone	☐ Enabled ☐ Disabled
Enable Auto Diagnostics	☐ Enabled ☐ Disabled

Record Your Configuration, Continued

Timer Options	
Timer: All	☐ Enabled ☐ Disabled
Numeric Key Sets Times	☐ Enabled ☐ Disabled
Has Sleep Timer	☐ Enabled ☐ Disabled
PPV Reminder Time	☐ 5 minutes ☐ 10 minutes

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September 2012 Printed in USA

Part Number 4002178 Rev C