

Digeo, Inc.

Moxi Media Centers and Moxi Cable HD DVR 3012

Introduction to Moxi

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Learning Objectives

Additional training provides a review of Moxi Media Center processes and identify differences in Moxi Cable HD DVR 3012 processes for these job roles:

- CSRs CSR
 Troubleshooting; CSR
 Tool Overview
- Installers –
 Installation and

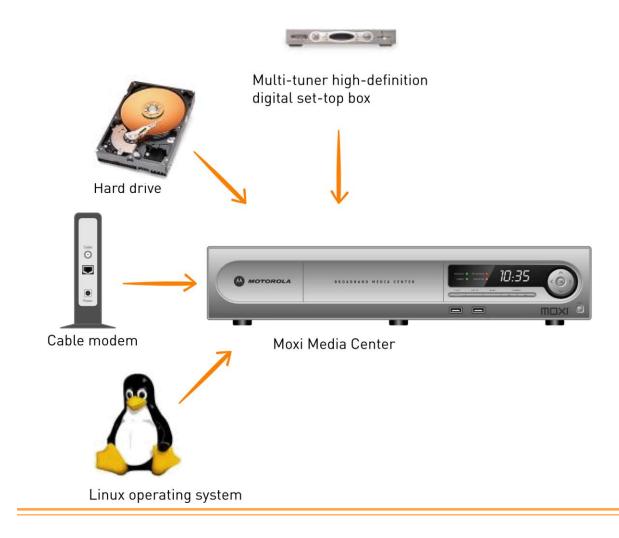
 Troubleshooting
- Dispatch DVR 3012 Differences
- Warehouse –
 Warehouse processes

Upon completion of this lesson, you will be able to:

- List and contrast the standard features of the various Moxi Media Center models and Moxi Mate, and the new Moxi Cable HD DVR 3012.
- Name and locate all ports and controls on the front and rear panels of the media centers and the Moxi Cable HD DVR 3012.
- Correctly identify the function of all Moxi remote buttons.
- Identify and describe how to use the major features in Moxisoftware v4.1
 - Describe how to use the Flip Bar.
 - Describe how to use Coming Up.
 - Describe how to use the digital video recorder to control live TV, and to record and watch programs.
 - Identify the categories on Moxi Menu and describe how to use them.
- Identify the differences between Moxi v4.1 (available on Moxi Media Centers) and v4.1c (available on Moxi Cable HD DVR 3012).



What is the Moxi Media Center?





Media Center Standard Features

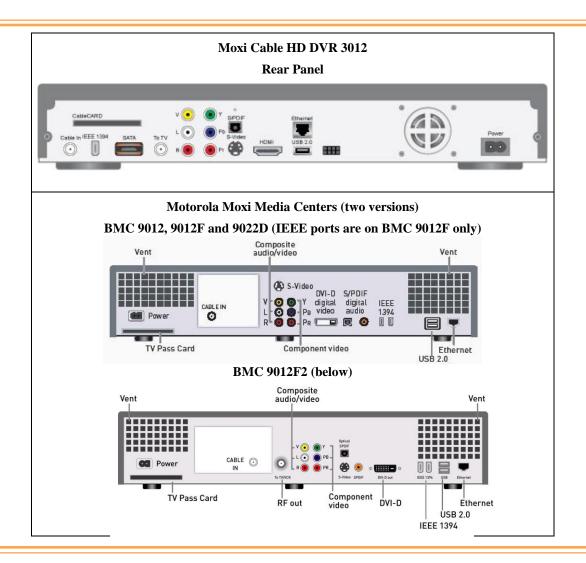
This table shows the specifications for the Moxi Media Center models and the Moxi Cable HD DVR 3012:

Specification	Moxi Cable HD DVR 3012	Moxi Media Center models
Model #	HDDVR3012	Motorola BMC9012, 9012F2, 9022D
Device type (OSD and CSR Tool)	mc3cable	Per above
Power supply	Line input voltage: 110V to 125 V AC Frequency: 50 Hz to 60 Hz	Line input voltage: 95 V to 125 V AC Frequency: 57 Hz to 63 Hz
USB power (front & rear)	Front: one 2.0 connector Rear: one 2.0 connector	Front: two 1.1 connectors Rear: two 2.0 connectors
HDMI power	Yes	None
DVI-D	No	All
Operating temperature	0-40 degrees Celsius	15 to 65 degrees Celsius



Rear Panels

Compare the rear panel differences between the Moxi Cable HD DVR 3012 and earlier Moxi Media Center models





Rear Panels Comparison

Rear Panel Connectors and slots	Moxi Cable HD DVR 3012	Moxi Media Center models
Video	Has HDMI Does NOT have DVI-D	All have DVI-D None have HDMI
Audio	Has S/PDIF optical Does NOT have S/PDIF coaxial	Has S/PDIF optical & S/PDIF coaxial
USB	Has one USB 2.0 port on rear	Has two USB 2.0 ports on rear
External Hard Drive connector	Uses eSATA	Uses USB 2.0
CableCARD slot	 Ships with installed Motorola M-CableCARD Screw cover (Follow standard company procedures regarding removal/replacement/re-seating of CableCARD for troubleshooting.) 	Has TV Passcard slot (not active)



Front Panels

Moxi Cable HD DVR 3012 - Front Panel



Motorola Moxi Media Centers

Front View





Front Panel Comparison

Front Panel Lights and buttons	Moxi Cable HD DVR 3012	Moxi Media Center models
Lights	Power, Recording, and Message lights on left side	Power, Recording, and Message lights on LED display
Buttons	Menu, Reset, Left, Right, Up, Down, OK	Menu, Left, Right, Up, Down, OK, Reset, Live TV, Channel Up, Channel Down



Moxi Mate Features

- Shared dual cable tuners and Digital Video Recorder (DVR) with multi-room enabled Media Center
- Shared CD/DVD drive with multi-room enabled Media Center
- Integrated HDTV decoder
- Integrated Digital Video Recorder (DVR)
- High quality interactive graphics
- Standard RF and Audio/Video outputs
- Clock display
- Front panel control buttons



Moxi Mate Specifications

- Power supply: line input voltage 95V 125V AC;
 frequency 57Hz 63Hz
- Operating temperature: 15°C 40°C
- Dimensions (W x H x D): 10.3" x 2" x 6"
- Weight: approximately three pounds

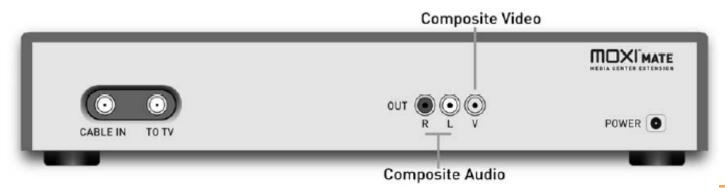


Moxi Mate Panels

Front View



Back View





Moxi Remotes

Use the new version of the Moxi remote with the HD DVR:

- All of the buttons on the new remote are white; the buttons on the older models are grey (top half) and black (bottom half).
- The second button from the right in the top row of buttons has the orange "Moxi lens" instead of the word "VOD" or "on demand."





Meet Moxi

The team

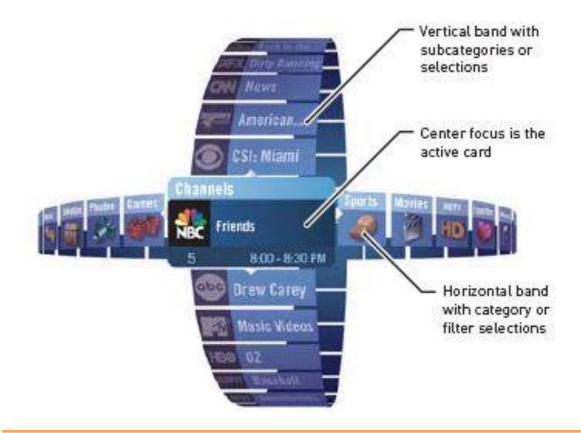
- Moxi Media Center or HD DVR 3012
- Moxi Menu
- Moxi Remote





Moxi Menu

Moxi Menu is an exciting and fun "watchband' interface that lets viewers easily find shows or special Moxi features.





Moxi Remote

* locks and unlocks SuperTicker items ticker displays and hides SuperTicker power turns the TV and audio receiver on and off on demand jumps to the On Demand category live TV jumps to full-screen live TV

play starts a recorded program, song, or album rew multi-speed rewind for playback (press multiple times to select speed)

fwd multi-speed forward for playback (press multiple times to select speed)

rec starts a recording

stop stops a program, song, or album

pause pauses a live or recorded show, song, or album

replay jumps back seven seconds, moves the Moxi Menu back one day

skip jumps ahead in stored or recorded video, moves the Moxi Menu forward one day

number keys tune directly to channels, enter text in menus, make choices in games

1 press twice to backspace during text entry

O press twice to add a space during text entry

clear deletes all entered text, deletes shows from Recorded TV, and dismisses the Moxi Menu and Flip Bar

enter applies numeric or text entries



info displays additional information about the selected item

zoom toggles between an open Moxi Menu and full-screen TV without losing menu position

arrow up, down, right use to navigate menus, play games (hold for turbo speed)

arrow left exit most menus, navigate menus, play games (hold for turbo speed)

OK selects or activates the selected item

back jumps back 15 minutes, shows last note page, jumps 30 minutes in the Moxi Menu, or goes to the previous photo

next jumps back 15 minutes, shows last note page, jumps 30 minutes in the Moxi Menu, or goes to the next photo

MOXI opens and closes the Moxi Menu from most places (two presses might be required)

vol adjusts the audio volume on the TV or audio device mute toggles sound on and off

jump goes to the last viewed channel

ch changes channels or pages through vertical menus (hold for turbo speed)

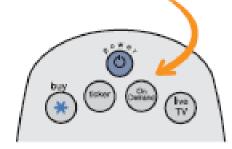


Two versions of the Moxi Remote

Check the battery compartment. New remotes' model # ends in "1".

New remote

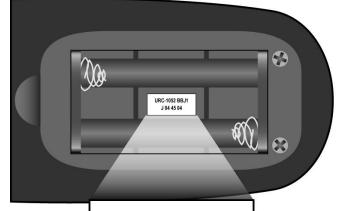
- Controls two devices with the power button
- Loaded with updated TV and device codes
- · Has On Demand button



Old remote

- Controls one device with the power button
- May not support some newer TVs
- Has VOD button





When programmed with just the TV device code, the remote controls audio on the TV. When programmed with a second device code, the remote controls the audio device.

URC-1052 BBJ1 J 04 45 04



Moxi Menu Screen





Action Menu Options





See All Times

Displays all instances of a show across time and channels.





Using Moxi Menu

- Browse for shows in Channels, HDTV, Favorite Channels, and Recorded TV, or by program type.
- Access special Moxi features, in Settings, Find & Record, Ticker, PPV, Games, and Photos.

Note: Only on
BMC9022D Media
Player – use to access
and control the
CD/DVD drive

Jukebox- use to access and control your music library stored on the BMC9022D:

watch this!

Moxi Menu categories are on the horizontal band. Options within each category appear on the vertical band.



Access Features

- Moxi bring up Moxi Menu
- OK To select an item, bring it into center focus and press
- Horizontal navigation -Left/Right arrows
- Vertical navigation -Up/Down arrow
- Info Get more information on a show in center focus
- live TV Exit Moxi Menu (return to full screen TV)





Change Time Slot

Remote Actions

Next – each press updates the schedule ½ hour ahead.

Back - each press takes the schedule back ½ hour (if viewing future listings).

Skip – each press updates the schedule 24 hours.

Replay – each press takes the schedule back 24 hours (if viewing future listings).

Moxi – returns the schedule to the current time.

Change the time across Moxi Menu using the Change Time Slot card or the Moxi Remote.





Info Paddle with Coming Up

Info Paddle

- Line 1 has TV rating/movie rating, repeat, year, price and star rating.
- Line 2 has title (episode or show) and description.

Use Moxi Remote to scroll through programs in the Coming Up panel.





Flip Bar

Info Paddle

- Left panel displays program and network information. When highlighted, Up/Down arrows browse other channels. Press OK to bring up the Info note and action menu to watch or record the show
- Right panel displays shows that are Coming Up. Use the panel to see up to two weeks of programming on channels selected on the left panel.





Digital Video Recorder

- Control Live TV pause, rewind, and replay live TV.
- Record your favorite shows and series just by knowing the correct title.
- The number of shows you can record depends on the type of shows—analog, digital, or HD. The media center potentially records up to 21 hours of analog shows, 51 hours of digital shows, or 11 hours of HD shows.
- Watch one recorded show while Moxi is using the two tuners to record two other shows.



Control DVR

- play begins playing the program
- pause pauses the program
- rew rewinds at variable speed—rewinds faster with each press
- fwd fast forwards at variable speed—goes faster with each press
- stop stops recording or playback of a recorded show
- rec gives you the option of recording the show
- replay jumps back seven seconds
- skip jumps ahead 30 seconds (if possible)





Live TV Buffer

Remote actions:

- Press the play button to bring up a status bar.
- The buffered amount of the show is represented by the highlighted area in the status bar.

When watching live TV, Moxi automatically buffers the show. The amount of available temporary memory space to buffer live TV varies, but is never less than 30 minutes for standard-definition shows and 10 minutes for high-definition.





Recording Live TV

- Press the rec button on the remote while you're watching a show.
- Select Record Once to record a single show.
- Select Record series to schedule multiple episodes of a series.
- After scheduled, select Recording Options to set additional recording options at the time of scheduling.

When you start recording live TV, the show in the buffer is added to the recording.





Storage Space

The percentage of used recorded TV storage space displays in About Moxi on the the Storage & Stats card.





Recorded TV

Recorded programs display in appropriate Moxi Menu filters, and in the Recorded TV category.





Recording Icons

 Recording now - indicates that a show is currently recording



 Protected against deletion - indicates that a show or series is protected, and Moxi will not delete it without your permission.



 Subject to deletion - indicates that a show may be automatically deleted within 48 hours to make space for new recordings.



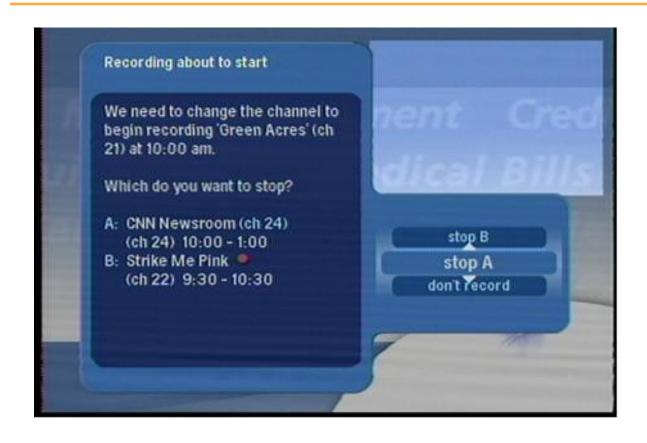
 To be recorded - indicates that a show is scheduled to be recorded.





Select Tuner for Recording

If one tuner is either recording, or on a PPV program when a scheduled recording is about to start, the user can select to record the new show, to change the current show, or to stop the current recording.





Browse for Shows

Use these cards on Moxi Menu:

- Channels Use to choose a channel to watch or record a current show.
- Favorite channels Use to select from your most frequently tuned channels.
- PPV Use to access shows provided through PPV.
- Filters: HDTV, News, Kids, Sports, Movies Use to quickly locate shows in these genres.



Channels

Displays all channels which have been checked in **Channel List** in the Settings category. Press **OK** to select to watch or record a show in center focus.





Recorded TV

Find recorded shows in Recorded TV and other Moxi Menu categories classified by genre. On the vertical band, recorded shows are sorted alphabetically by title, and then by date and time recorded.

Use the Moxi remote to control playback.
Use the Moxi player bar to see the time block for that recording, and where you are within that time block.







Favorite Channels

Favorite channels are automatically managed by Moxi--it keeps track of your top fifteen favorite channels and lists them in **Favorites** for easy access.

Coming Up is available from **Favorites**.

Recorded shows are included; channels blocked by parental controls are excluded





Pay Per View

Moxi makes it easy to browse and purchase Pay Per View titles directly from the **PPV** category on Moxi Menu. PPV titles can also be found in other Moxi Menu categories, such as **Movies**





Video On Demand

Moxi's Video On
Demand (VOD) category
offers a library of movies
and shows, which may
be purchased and
watched for a specified
number of viewings, or
during a limited time
period. VOD titles are
listed in the Video On
Demand category as
well as in other
categories such as
Movies.





Filters

- Music
- News
- Kids
- Sports
- Movies
- HDTV















About Moxi

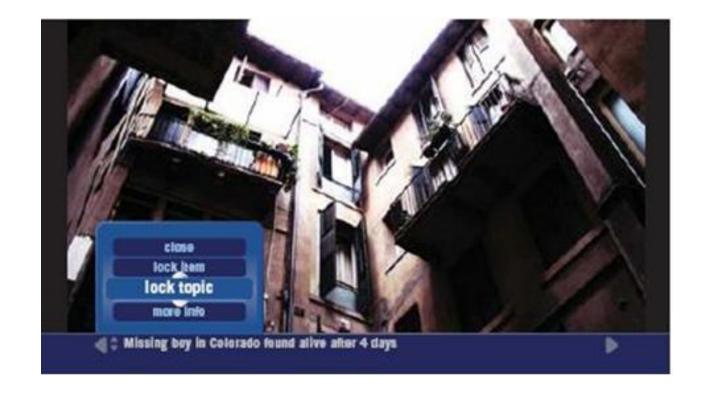




Super Ticker

SuperTicker auto-scrolls at the bottom of the screen unless locked by the viewer.
While on a topic or item, press OK on the Moxi remote to display the action menu.

Launch Ticker by selecting the **Ticker** category on **Moxi Menu** or by pressing the **Ticker** button.





Ticker Topics

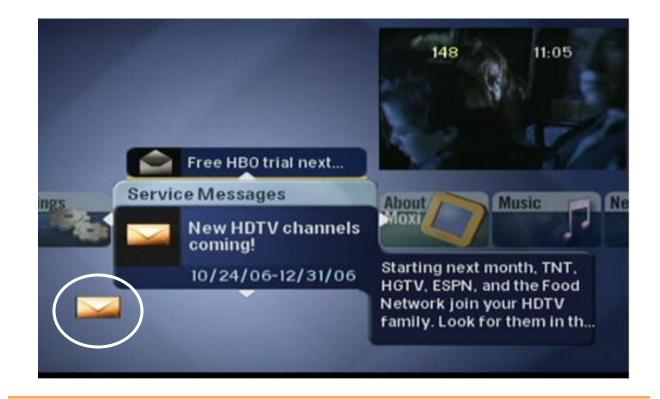
Topics	Items	
Weather (Local city as well as frequently traveled cities)	Today	
	• Forecast (4-day)	
Sports Note: Categories appear in Ticker seasonally, depending on their annual schedule.	Headlines	
	• MLB	
	NFL	
	• NBA	
	• NHL	
	C. Football	
	C. Basketball	
	• PGA	
	NASCAR	
News	Headlines	
	World	
	Bad	
Business	Headlines	
	Market	
Entertainment	Headlines	



Service Messages

Service providers have the ability to create and schedule for display an unlimited number of short service-related messages on Moxi Menu on the Service Messages card

When a new service message is viewable, the red message light on the front of the media center illuminates and a small message icon appears in the lower left corner of the TV screen, as shown below.





Photos

Photos vertical band lists a sample album and any viewercreated albums.

Uploaded photos are collected in an album, labeled with the date of the upload.

Upload and store up to 3750 digital photos from a digital camera or memory card reader using a recommended card reader.





Upload Photos

Use the 2.0 USB port on the rear panel:

- Do not remove the memory card or unplug the camera during upload.
- Press the Stop button on the remote to stop the upload.
- Photos are saved up to the storage limit.
- Photos larger than 10MB are skipped.

Upload digital photos from a digital camera or memory card reader. The auto-detect note or appears whenever a memory card or camera is plugged into the media center.





Play Slideshow

- Press fast-forward or rewind to speed up or slow down the slideshow.
- Press pause to halt the slideshow in the current picture.
- Press the right arrow, skip, or next to advance to the next photo.
- Press the left arrow, replay, or back to return to the previous photo.

The photos flip bar displays the photo label and album ID. Pressing any of the Moxi DVR control buttons brings up the **Flip Bar** for three seconds.





Work with Photos

- rotate left
- rotate right
- delete photo

When the flip bar is up, press **OK** to see the photo editing options, or, from an open album, press **OK** with a photo in center focus.







Photos Troubleshooting

- Ensure that the camera's memory card is correctly inserted in the card reader.
- In rare situations, the media center may "hang" while uploading photos. Advise the customer to reboot the media center and try again.
- If error messages are presented to the viewer, tell them to follow the directions on the message or to wait while the application restarts and then try again.



Games

- Blackjack
- Solitaire*
- Video Poker
- Tomato
- Blast It
- Invasion Wave
- Ping
- Block Breaker
- Codebreaker
- Mah Jong
- Slots
- Bowling*
- Bubble Blast*
- 21 Frenzy*
- *These games display mini TV DVR 3012 games are shown in red above.

Select a game, then follow instructions to play.





Find & Record

Has both search and management functions.





Search Results Examples

By Title: all titles are listed; narrow using keyboard.



By Keyword: no results until key word is submitted.





Find By Category

- Movies
- Sports
- Comedy
- Arts
- Children
- News & Business
- Reality
- Action & Adventure
- Living
- Drama
- Documentary
- Educational
- Talk Show

Selecting **By Category** opens a new horizontal band of category options. When a category option is in center focus, a vertical band of selectable titles expands (24-hours of programming).





Recording Options

Recording
Options allow
the viewer to
specify criteria for
recording a
single show or a
series.

Access the recording options menu from a show that is recording or scheduled to record. Press **OK** while on the show title anywhere in Moxi Menu. Recording Options vary for single shows and series.



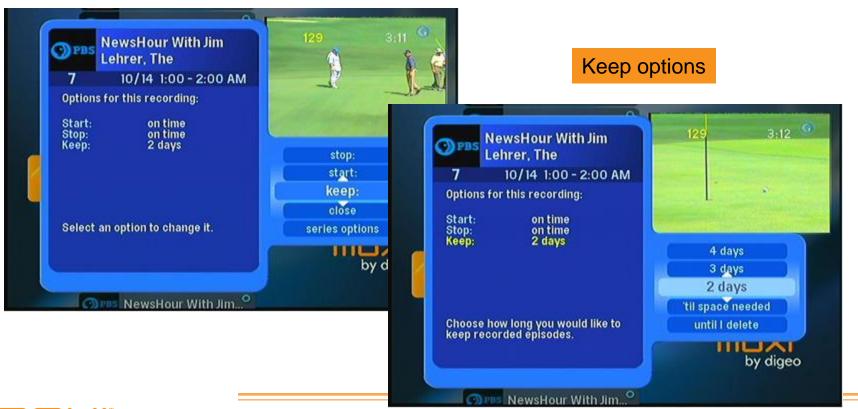


Single Show Recording Options

- Start
- Stop
- Keep

For single shows, Recording Options include when to start and stop recording, and how long to keep the recording.

Note: For an episode of a series, there is also a series options choice.





Series Recording Options

- Start
- Stop
- Keep
- Episode Limit
- Accept repeats
- Timeslots
- Priority





Scheduled to Record

- Cancel recording
- Recording options
- See All Times
- Lock

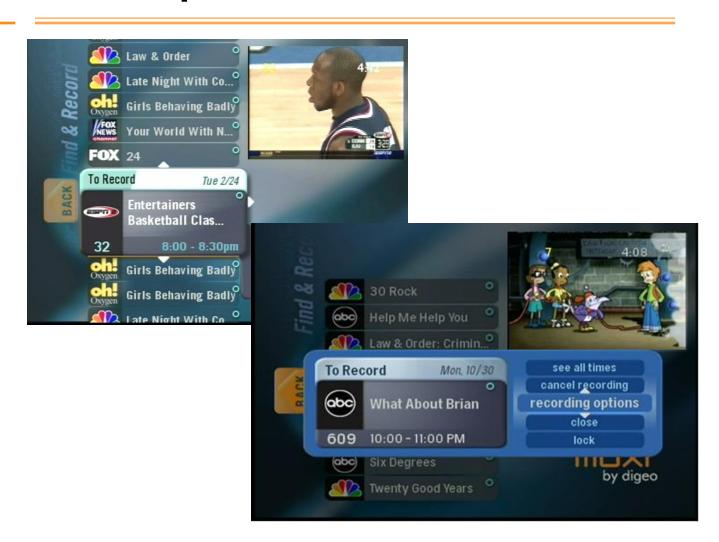




Series Options

Selecting Series
Options from the
Find & Record
vertical band,
displays a list of
scheduled series.

Pressing **OK** with a series in center focus brings up the action menu, which allows you to delete the series as well as manage recording options for the whole series or for episodes.





Canceled & Deleted

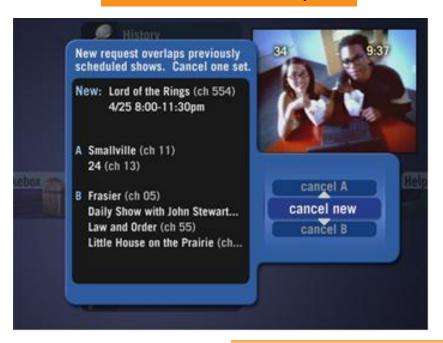
- Moxi keeps a seven day record of canceled recordings and deleted shows.
- To see the current list, choose Find & Record, and then Canceled & Deleted.
- If a show you wanted was canceled or deleted by Moxi, you can determine the cause and schedule it to record again the next time it comes on.
- It is not possible to retrieve a show that has been deleted.



Recording Conflicts

- Both tuners are already allocated or are in use.
- Disk space is in conflict note will advise if shows will be deleted immediately, or may be deleted when scheduled show records, or no space is currently available.

Tuner Conflict Example



Space Conflict Example





Recording About to Start

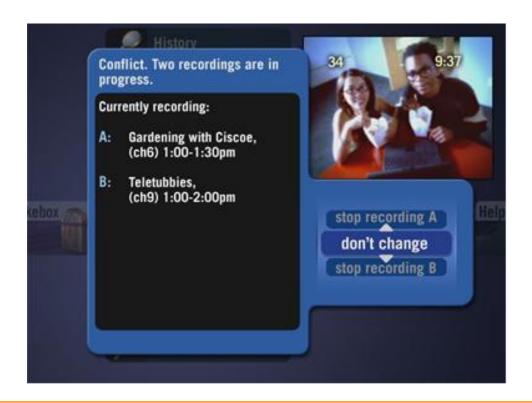
- One tuner recording or watching PPV.
- Viewer given choice to stop current recording, stop upcoming recording, or use available tuner for new recording.





Both Tuners Recording - warning

- Both tuners recording.
- Viewer receives warning if tries to change channels.





Settings

- Channel List
- Sound Effects
- External Hard Drive
- HDTV Setup
- Skip
- Widescreen
- Audio Output
- Secondary Audio Programs (SAP)
- Closed Captions.
- Parental Controls





Confidential

Channel List

When the channel card is:

- Unchecked, it will NOT appear in Moxi Menu and cannot be selected using the remote number pad.
- Checked, it WILL appear in Moxi Menu.

Press OK to check/uncheck a channel when the card is in center focus.





Sound Effects

Select the volume for the sounds associated with remote actions on Moxi Menu.





External Hard Drive

- Dedicate for use with one specific media center only.
- Do not store other data.
- Replacing media center results in loss of programs on EHD.

One external hard drive may be connected to the media center to gain additional storage space for recorded programs.





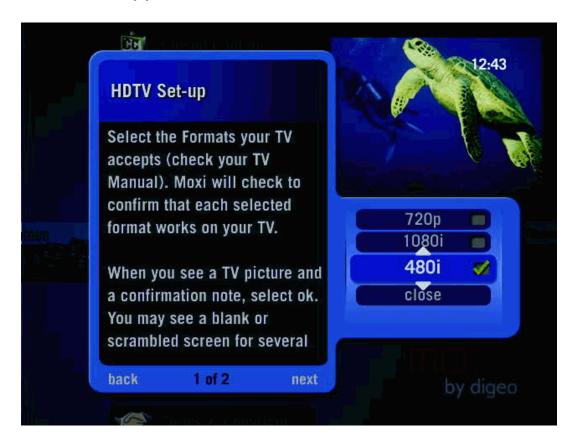
Connect/Disconnect EHD

- Connect the hard drive to a USB 2.0 port on the rear of the media center or to the eSATA port on the DVR 3012.
- 2. Wait for the media center to recognize the external hard drive.
 - a. When a hard drive is plugged in to the media center for the first time, or if the drive is not properly formatted for some reason, you will be prompted to format the drive, which will delete all existing data on the drive. Select reformat and then confirm that choice.
 - b. Once the drive is recognized by the media center as properly formatted and available for use, the media center scheduler recognizes the additional space.
- 3. To disconnect a hard drive, access the External Hard Drive card in the Settings category on Moxi Menu, Press OK, select Disconnect, and press OK. Heed the directions on the note. Do not physically disconnect the drive if the note advises that the drive is in use and cannot be disconnected



HDTV Setup (Media Center)

In HDTV Setup, choose 480p plus the highest resolution your TV supports—either 720p or1080i. Only check 480i if you are sure the TV supports it.





Manual video output configuration (Media Center)

If there is no picture, use the following procedure to manually override the video output.

- 1. On the media center front panel, simultaneously press and hold the **Live TV** and **OK** buttons to display the current video mode on the front panel LED (where the time is normally displayed).
- 2. Use the Channel Up and Down buttons on the front panel to select the proper video output setting.



HDTV Setup (DVR 3012)

HDTV Setup for the HD DVR 3012 is identical to the media centers, except the highest video connection is HDMI, not DVI-D. Video connections and supported resolutions are shown in the table below.

Video Connection	Resolution			
	480i	480p	720p	1080i
HDMI	✓	✓	✓	✓
Component (Y P _B P _R)	✓	✓	✓	✓
S-video, Composite, RF	✓			



Manual video output configuration (DVR 3012)

The procedure to access manual video output configuration on the HD DVR is different than on the media centers because the front panel buttons are different.

Follow these steps to access video output configuration manually on the HD DVR:

- 1. Simultaneously press the **Up** arrow and **Menu** button.
- 2. Press either the Left or Right arrow twice to cycle through the video output options [SD (for 480i), 480p, 720p, and 1080 (for 1080i)]. At the video display prompt on your TV ("Can you see a picture?"), use the Up and Down arrows to select **Yes** or **No**, and then press **OK** to make your selection. Continue the process until you see a picture and respond "yes" to the question



Skip Settings

If allowed by company policy, the Skip card appears in Settings for users to set the duration of the Moxi remote Skip button interval.

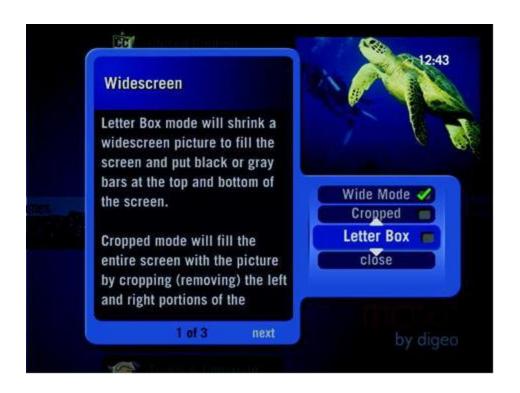
The Skip card displays the current setting.





Widescreen

Use the Widescreen option to specify the TV display mode. Standard TV display has a 4:3 width to height ratio. Widescreen has a 16:9 ratio.

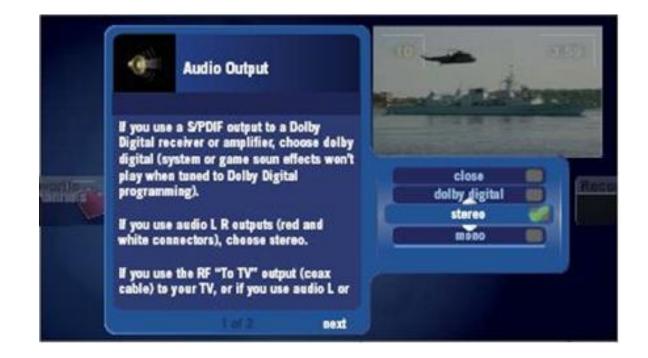




Audio Output

When **Audio Output** is set to
Dolby Digital, the
digital channels can
be noticeably
quieter than the
analog channels.
The levels are
currently set to the
Dolby
specifications, so
this is the expected
result.

Use the **Audio Output** action menu to specify whether the media center is connected to a Dolby Digital-capable receiver or amplifier. When the media center is connected to a standard TV, the "Line-Out Digital" option protects the TV speakers by reducing the volume range.



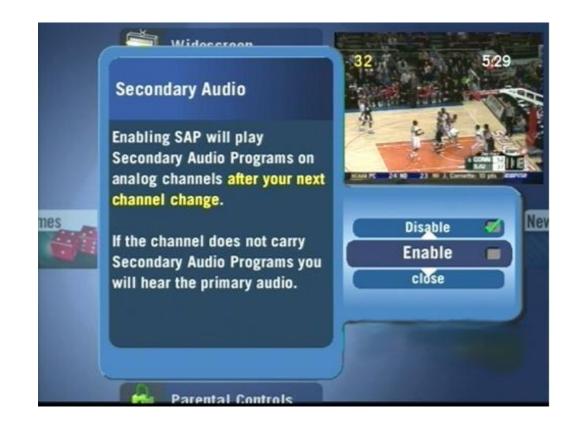


Alternate Language

Alternate languages may be available for current programs on both analog and digital channels:

- Analog –Secondary Audio in Settings
- Digital Flip Bar action menu (if available on the program)

Analog programs





Closed Captioning

- Captioning –On/Off
- Basic Service (608 CC field)
- Digital Service (708 CC field)
- Display Preferences
- LanguagePreference

Press OK to invoke the Closed Captioning horizontal band. Use the Left/Right arrows to bring the appropriate option into center focus.





Parental Controls

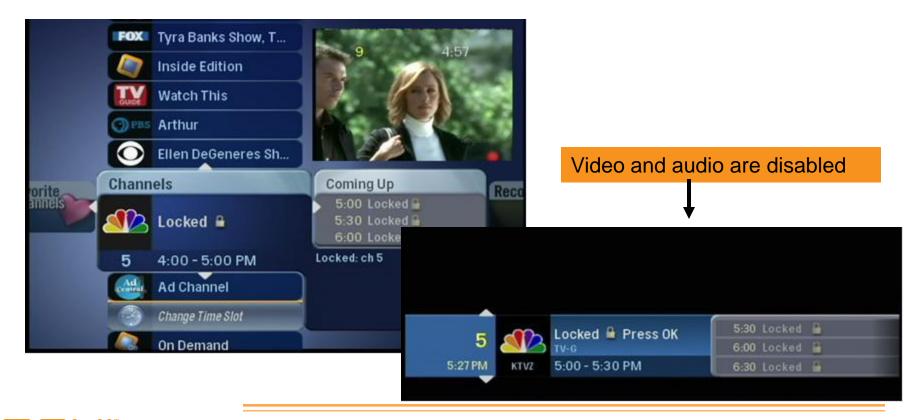
Parental Controls can be turned on using the **Lock** option on the action menu for all shows, or in the Parental Controls section of the **Settings** category on Moxi Menu.





Parental Controls – lock icon

On Moxi Menu and the flip bar, programs that are locked by parental controls display a padlock icon and the word "Locked" in place of the actual title and the Info paddle only displays the reason that the program is locked





Parental Controls - Settings

- TV Ratings*
- Movie Ratings*
- Lock by Channel
- VOD/PPV (set to require PIN to buy VOD/PPV)
- Set Relock Timer
- Change PIN (CSR must reset forgotten PIN in the DAC)
 - * "Not Rated" TV and movies (MPAA) are treated like the most restrictive media (e.g. "NC-17").
 - * "Unrated" or missing rating TV and movies are treated like the least restrictive media (e.g. "G").

Select **settings** on the parental controls action menu for options to control access to shows.

Media Centers are deployed with the TV Ratings and Movie Ratings set to the most restrictive options (MA and NC-17). Creating a PIN turns parental controls ON and the two default settings take effect. Scroll to the TV Ratings and Movie Ratings to select different options if desired.





Parental Controls – "Off" Options

- Always Off Use to turn Parental Controls Off until you decide to turn them ON.
- "X"-hour off ("1-hour to 6-hours off") Use to turn Parental Controls Off for the number of hours set using the "Set Relock Timer." A warning is given before they turn back on.





Learning Objectives

You should be able to:

- List and contrast the standard features of the various Moxi Media Center models and Moxi Mate, and the new Moxi Cable HD DVR 3012.
- Name and locate all ports and controls on the front and rear panels of the media centers and the Moxi Cable HD DVR 3012.
- Correctly identify the function of all Moxi remote buttons.
- Identify and describe how to use the major features in Moxi software v4.1
 - Describe how to use the Flip Bar.
 - Describe how to use Coming Up.
 - Describe how to use the digital video recorder to control live TV, and to record and watch programs.
 - Identify the categories on Moxi Menu and describe how to use them.
- Identify the differences between Moxi v4.1 (available on Moxi Media Centers) and v4.1c (available on Moxi Cable HD DVR 3012).

