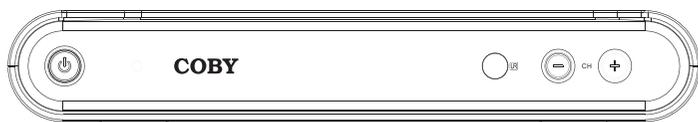


COBY®



DTV-102

Please read this manual before connection and use.

Customer Service Hours

Hours: 800AM-11:00 PM EST, seven days a week.

E-Mail : techsupport@cobyusa.com

Phone: 718-416-3197, 800-681-2629, or 800-727-3592

Web: www.cobyusa.com

English

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Introduction

This User Guide provides detailed information to correctly setup and evaluate the DTV-102 Converter Box. A procedure is described to setup the converter box for normal operation using the provided GUI software, with details for evaluation of the many provided features.

1.1 Safety and Product Information

Warning: Use only the provided AC100~240V, 50Hz/60Hz power supply.

Warning: To prevent damage which may result in fire or electric shock hazard, do not expose this module to rain or moisture, or use it near water.

Caution: Outdoor Antenna Grounding - If an outside antenna is connected to the product, be sure the antenna is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electric Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Introduction

1.2 Important Safety Instruction

- Read these instructions. Heed all warnings.
- Do not use near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Maintain well ventilated conditions around the roduct. Do not put product on bed, sofa or anything that blocks ventilation. Install according to instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
- Do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Introduction

1.3 Board Level Description

The DTV-102 supports one input and two outputs. The input is a standard RF connector, which can be connected to an antenna with a coaxial cable. The outputs are standard NTSC composite video and left/right audio outputs, with RCA jack connectors, and a standard RF output; both are provided to insure an easy connection to any analog TV. The RF output provides video modulated on Channel 3 or Channel 4, as selected by the on-board switch.

The Audio/Video (A/V) cables provide good picture quality and stereo sound, and should be used if available on the TV. The A/V jacks are color coded (yellow for video, red for right audio and white for left audio). If the TV has only one input for audio (mono), connect it to the left (white) audio jack on the converter box (CB).

The RF jack and coaxial cable provide acceptable picture and mono sound quality. It should be used if A/V connections are not available on the TV. RF jacks are typically used to connect your TV to terrestrial antenna sources.

Note: Be sure to use RG-6 coaxial cable when connecting from the antenna to the CB module.

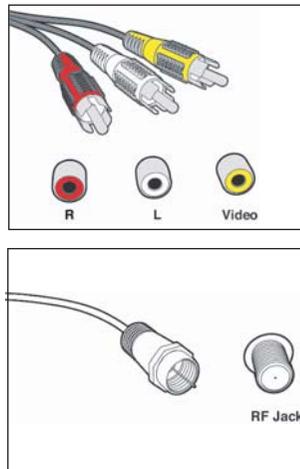


Figure1. Connectors

Introduction

The module also includes an infra-red (IR) receiver and three push buttons to provide front panel control for the power on/off and channel up/down functions.

The only one LED indicates three possible power states for the converter box:

- Powered on and functional Bright Green LED is ON
- In stand-by mode Dim Red LED is ON
- Powered off Red LED is OFF.

Introduction

1.4 Remote Control Description

Key Description

A description of the remote control button functions is shown in Figure 2 below.

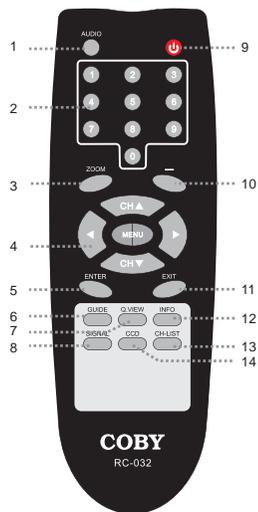


Figure 2. Remote Control Button Functions

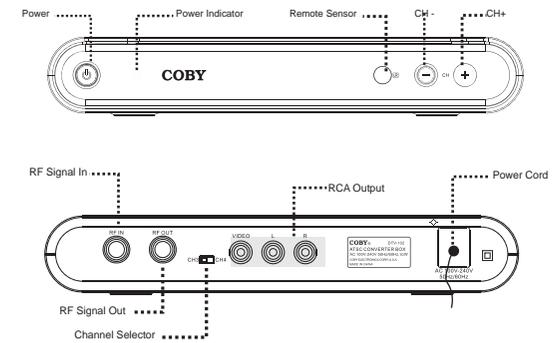
1. **AUDIO**
Press to set the audio mode.
2. **Number keypad**
Press to input data.
3. **ZOOM**
Press to zoom the image.
4. **Direction Buttons & MENU**
While working with the system menu, press the direction buttons to move between the options. The up/down direction button works also as the channel+/- button. Press MENU to display the menu.
5. **ENTER**
Press to confirm settings.
6. **GUIDE**
Press to show the program guide.
7. **Q.VIEW**
Press to view the previous channel.
8. **SIGNAL**
Press to display the signal quality information.
9. **POWER**
Press to turn on/off the player.
10. **CH +/- Button**
Press to display the digital input field.
11. **EXIT**
Press to back up/exit the menu.
12. **INFO**
Press to show the current working status.
13. **CH-LIST**
Press to show the channel list.
14. **CCD**
Press to set the closed caption.

Introduction

1.5 Unit Description

A description of the buttons and the connectors on the main unit is shown in Figure 3 below.

Figure 3. Buttons on the Main Unit



POWER
Press to turn the unit on/off.

CHANNEL +/-
Press to skip channels.

Power Indicator
Under the normal working mode, it lights green.
Under the standby mode, it lights red.

Remote Sensor
Sense the remote signal.

RF Signal In
RF IN connector

RF Signal Out
RF OUT connector

Channel Selector
Switch between the channel 3 and the channel 4

Power Cord
Plug into the power supply.

Installation

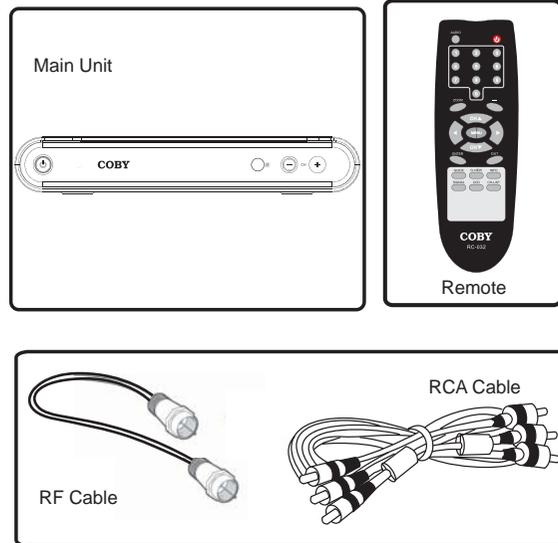
2.1 Setup Checklist

The required hardware and equipment necessary to use the DTV-102 are:

- DTV-102 converter box
- Converter box remote control and 2 AAA batteries
- RF cable for output
- Composite video and audio cables, or RF cable, for output
- RF video source (terrestrial antenna)
- Analog TV with composite video/audio or RF input

2.2 Unpacking

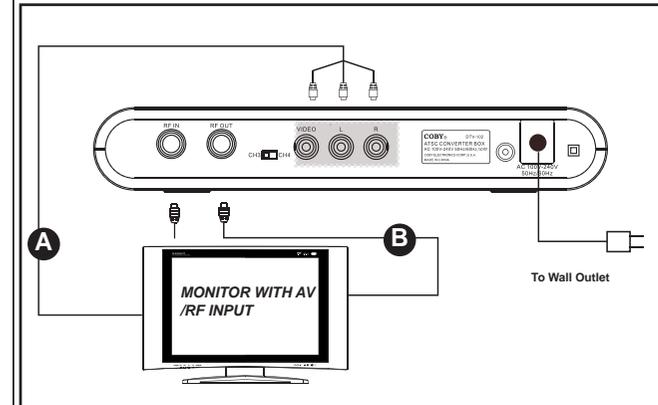
The following items are included with your product. If any items are missing, contact your dealer.



Installation

2.3 Cable Connections

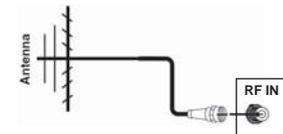
Figure 4. Cable Connections



NOTE: Set the external receiver to the relative input mode to enable the signal pass.
When output signal, refer to the user's manual of the external receiver as well.

Input the TV signal to your converter box

Connect the RF source to the RF IN connector located on the unit's rear panel. To view television channels, a signal must be received by the device from one of the following sources: The internal antenna/An outdoor aerial antenna/A cable television network/A satellite network.



Installation

Output the TV signal from your converter box to the external receiver

You can adopt either of the methods below to output the TV signal to the external monitor.
Refer to A,B in the Figure 4. for better understanding.

A. CVBS Output

- Connect the video port (VIDEO) by the supplied RCA cable. (yellow plug).
- Connect the audio port (L, R) by the supplied RCA cable (white&red plug).

B. RF Output

Connect the RF OUT port by the RF cable to output the TV signal.

NOTE: Only two channels are available if you chose to output the signal by the RF cable.

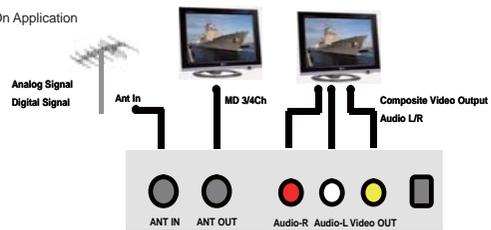
Slide the channel switch on the unit's rear panel to select the channel 3 or the channel 4.

Left Position - - CH3 Right Position - - CH4

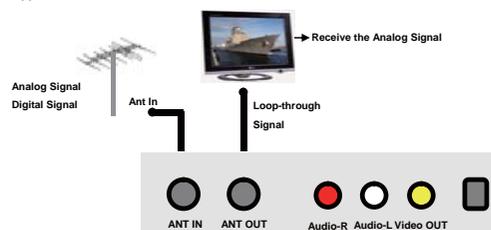
C. Analog pass-through Application

- Power On : User Setting the A/V and Modulator 3/4Ch Output
- Power Off : User Setting the analog pass-through Output

1) Power On Application



2) Power Off Application



Power Connection

Insert the power plug into the wall outlet with AC100V-240V, 50Hz/60Hz.

NOTE: Be sure to have all necessary cable connections properly done before connect the power source.

If the player will not be used for a long period of time, disconnect the power and remove the batteries from the remote.

Installation

2.4 Remote Control Battery Installation

1. Unlatch the battery compartment cover on the back of the remote control.
2. Insert 2 AAA batteries into the battery compartment, making sure the + and - ends of each battery line up with the corresponding marks in the battery compartment, as shown in Figure 5 below.
3. Snap the cover back on to the remote control.



Figure 5. Install Remote Control Batteries

2.5 Initial Setup

After the input/output connections have been made, and the DTV-102 has been powered up, a blue screen should be seen on the TV screen. Pressing the MENU button on the remote control should display the main menu on the screen, as shown in Figure 6 below. Chapter 3 in this User Guide describes the procedures for basic TV operations such as scanning for channels, changing channels, language control, and information display. Refer to Chapter 4 for more details about all of the Menu features and controls.



Figure 6. Main Menu

Basic Operation

This chapter will describe the steps required for basic operation of the DTV-102 converter box (CB), including performing the initial channel scan, changing channels, language control, and information display. Please refer to Section 1.4 above for a description of the converter box remote control button functions as referenced in this chapter.

3.1 Initial Channel Scan

1. To perform a channel scan when the input is from a terrestrial antenna, click the MENU button on the CB remote control to display the setup menu, press the ◀ ▶ navigation buttons to highlight "CHANNEL", press the ▼ navigation button to select "Auto Scan", press the ▶ direction button or the ENTER button to start auto scan.



Figure 7. Auto Scan Sub-Menu

2. After pressing the ▶ navigation button or the ENTER button, the DTV-102 will scan the RF input for all DTV channels, and add these channels to the list of available channels. The Auto Scan Status window, as shown in Figure 8 below, shows the progress of the channel scan as well as the total number of digital channels found, including major and minor channels.

The auto scan process can be cancelled at any time by pressing the ENTER button on the CB remote control.



Figure 8. Auto Scan Status Window

3. After the channel scan is completed, the menu window will disappear, and the converter box will display the first locked channel.

Basic Operation

3.2 Changing Channels

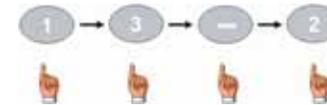
One advantage of digital television is the ability for a broadcaster to transmit more than one program simultaneously on one channel. This is done by using major and minor channel numbers such as 4-1 (major channel) and 4-2, 4-3 and 4-4 (minor or sub-channels.) With digital television, a broadcaster on channel 4 (the major number) may provide their usual programming on channel 4-1 but also provide other programs on channel 4-2, 4-3, 4-4, etc. Note that some broadcasters only broadcast their usual programming on one channel such as 4-1. Note that you can watch HDTV programs even if you do not have an HDTV capable television. When the HDTV programs are received by the CB, the CB converts the broadcaster's signal so it can be viewed on any television in standard resolution.

After scanning, switching between channels can be easily done like changing channels on a regular television, but there are several ways to do it:

- Use the Channel Up (Ch+) and Channel Down (Ch-) buttons on the CB remote control.
- Use the Channel Up (Ch+) and Channel Down (Ch-) buttons on the CB front panel.
- Use the number and dash (-) remote buttons to enter in the desired channel number.

Enter in the major number, then the "-" button, then the minor number.

(e.g. Enter "1", "3", "-", "2" to tune to channel 13-2.)



If the major channel is desired, it is only necessary to enter in the major channel number

(e.g. Entering "1", "3" will tune to channel 13-1.)

- Use the Q.VIEW button to switch to the last channel viewed.

Basic Operation

3.3 Audio and Language Control

This section discusses the methods to control the audio levels and channel.

Volume Control

Audio volume can be increased or decreased by pressing the Volume +/- buttons on the CB remote control.

Audio Channel Information

Digital channels sometimes provide multiple audio tracks, often in a different language. If these alternate audio tracks are available, you can cycle through them by repeatedly pressing the AUDIO button on the CB remote control. If the language or audio track description is available, it will be displayed briefly on screen. The audio channel number depends on the broadcasting program. So far, only English, Spanish, French is supported in the box. Others will be considered as undefined.

Menu Language

The menu language can be changed by following these steps. See the Setup section in Chapter 4 for additional details on this menu option.

1. Press the MENU button on the CB remote control to display the setup menu.
2. Use the ◀ ▶ navigation buttons to highlight "OPTION", use the ▲ ▼ navigation buttons to highlight "Language" sub-menu.
3. Press the ▶ navigation button or the ENTER button to enter the language sub-menu.
In this sub-menu, select the Language option.
4. In this window, as shown in Figure 9 below, it is possible to select three menu language options: English, Spanish and French.



Figure 9. Menu Language Window

Basic Operation

5. Use the navigation buttons to highlight and select the desired language.
6. Press the ◀ navigation button or the MENU button on the CB remote control to exit out of this menu.
The Menu text will now be displayed in the selected language.

3.4 Information Display

The following text windows are used to display information with the DTV-102

- Channel Number – displayed briefly when changing channels.
- Volume Level – displayed when changing volume.
- Audio Information – displayed briefly when AUDIO button is pressed.
- Menu Windows – main menu and sub-menus are used to access setup and other features.
- Information Display – displays channel/program information when INFO button is pressed.
- Closed Caption – displays Closed Caption text when enabled.
- Guide Display – displays program information when GUIDE button is pressed.

The menu windows are discussed in Chapter 4. This section will discuss the Information, Guide and Closed Caption information display windows.

Information Display

When the INFO button on the CB remote control is pressed, a text window will appear on the screen, as shown in Figure 10 below.



Figure10. Information Display Window

This window displays information about the current channel and program being viewed.

The information includes the date, time, channel number and channel name. Information icons also provide additional details about the channel and program.

Basic Operation

Guide Display

When the GUIDE button on the CB remote control is pressed a text window will appear on the screen, as shown in Figure 11 below.



Figure11. Guide Display Window

This window displays information about the current and future program being watched, if that information is provided by the broadcaster. The information in this window includes the channel number and name, the current time, and the program name, start time, and end time for the current program and the next program. By repeatedly press the down ▼ navigation button, the information for additional future program can be displayed.

Closed Caption

Closed Caption (CC) provides an on-screen text version of the audio content for the program being broadcast. Not all programs support CC; if CC is supported for a given program, the "CC" icon will appear in the Information Display that can be viewed while watching the program by pressing the INFO button on the CB remote control.

Repeatedly press the CCD button on the CB remote to set the CC modes.

There are nine basic CC selection that can be cycled through by repeatedly pressing the CCD button.

The modes are: CC1, CC2, CC3, CC4, Text1, Text2, Text3, Text4, Off.

Menu Operation

This chapter describes all of the Menu features and controls provided with the DTV-102.

These menu features are accessed by pressing the MENU button on the CB remote control, and the navigation buttons (▲▼◀▶) are used to navigate within the sub-menus and to select the desired option. The left (◀) navigation button or the MENU button can be pressed to back up the menu. Pressing the EXIT button will exit completely out of the menu system. The four sub-menus available are:

- Channel – Auto Scan, Channel Add, Channel Edit, Manual Scan.
- Option – Clock, Aspect Ratio, Language, Audio Language, Closed Caption, DCC View, Sleep Mode.
- Lock – Lock System, Change Password, Block Channel, TV Rating-Children, TV Rating-General, Movie Rating, Downloadable RRT

4.1 Channel Menu Features

After pressing the MENU button on the CB remote control, use the ◀▶ navigation buttons to highlight "CHANNEL" and press ENTER or the ▼ navigation button to enter.

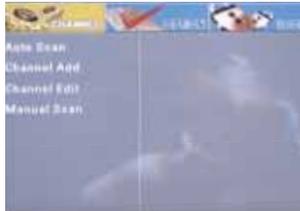


Figure 12. Channel Sub-menu

Auto Scan

The Auto Scan option is used to automatically scan for available digital channels, and should be used when powering on the CB for the first time. Refer to Section 3.1 for details on how to perform the Auto Program procedure. If initiated again at a later time, this process will erase all of the previously saved channels.



Figure 13. Auto Scan Sub-menu

Menu Operation

Manual Scan

The Manual Scan option is used to manually scan for available digital channels and to add additional channels to the list of available channels; it will not affect the previously saved channels. To use this feature it is helpful to know the broadcast frequency of the channel to be added, which is different from the channel number. For instance, your "local channel 4 news" may be on broadcast frequency 35. This is only important to know when adding a channel that was not detected by the Auto Program function. If you do not know the broadcast frequency number, see the web site antennaweb.org (for addresses in the USA.)

Use the ◀▶ navigation buttons to highlight "CHANNEL", press the ▼ navigation button to select "Manual Program", press the ▶ navigation button or the ENTER button to access.

The Manual Program window will appear, as shown in Figure 14 below.



Figure 14. Manual Scan Window

Use the ▲▼ navigation buttons to select the RF channel. Press ENTER to add it to the channel collection. To erase, press ENTER again. The signal strength information will be indicated by the bars in the bottom of the manual program window.

Menu Operation

Channel Add

The Channel Add option is used to automatically scan for available channels and to add additional channels to the channel collections; It will not affect the previously saved channels.

Use the ◀ ▶ navigation buttons to select "CHANNEL", press the ▼ navigation button to select "Channel Add", press the ▶ navigation button or the ENTER button to access Channel Add, press the ENTER button to stop.



Figure15. Channel Add

Channel Edit

The Channel Edit sub-menu provides the option of adding or deleting channels in the channel list.

After accessing "CHANNEL", press the ▼ navigation button to select "Channel Edit", press the ▶ navigation button or the ENTER button to access Channel Add.

Press the ▲ ▼ navigation buttons to select the channel, Press the ENTER button to add or delete.



Figure16. Channel Edit

Menu Operation

4.2 Option Menu Features

After pressing the MENU button on the CB remote control, use the ◀ ▶ navigation buttons to highlight "OPTION" and press the ▼ navigation button or the OK button to access.

The Option sub-menu has eight options: Clock, Aspect Ratio, Language, Audio Language, Closed Caption, DCC View, Sleep Mode as shown in Figure 17 below.

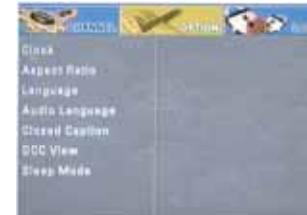


Figure17. Option Sub-Menu

Clock

The Clock sub-menu provides the option of selecting the desired Time Zone for North America.

This is used to automatically program the correct local time. There are eight time zone options: Hawaii (HA), New F.land, Atlantic (A), Eastern (E), Central (C), Mountain (M), Pacific (P) and Alaska (AK).

After accessing the OPTION menu, use the ▼ navigation button to highlight "Clock" and press the ▶ navigation button or the ENTER button to access "Clock".

Use the ◀ ▶ navigation buttons to set the desired time zone. See Figure 18 below.

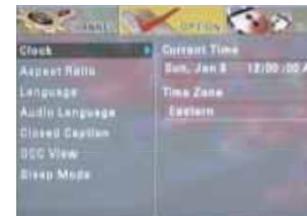


Figure18. Clock

Menu Operation

Aspect Ratio

The Aspect Ratio sub-menu provides the option of setting the display aspect ratio. There are four options: Set by program, Letter Box, Zoom, Full.

After accessing the OPTION menu, use the ▼ navigation button to highlight "Aspect Ratio" and press the right ► navigation button or the ENTER button to access "Aspect Ratio".

Use the ▲▼ navigation buttons to set the desired aspect ratio.

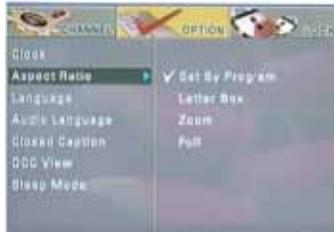


Figure19. Aspect Ratio

Language

The Language sub-menu provides the option of setting the OSD(On-Screen-Display) language. There are three options: English, Spanish, French.

After accessing the OPTION menu, use the ▼ navigation button to highlight "Language" and press the right ► navigation button or the ENTER button to access "Language".

Use the ▲▼ navigation buttons to set the desired OSD language.



Figure20. Language

Menu Operation

Audio Language

The Audio Language sub-menu provides the option of setting the audio language.

There are four options: English, Spanish, French.

After accessing the OPTION menu, use the ▼ navigation button to highlight "Audio Language" and press the right ► navigation button or the ENTER button to access "Audio Language".

Use the navigation ▲▼ buttons to set the desired audio language.



Figure21. Audio Language

Closed Caption

An estimated 28 million people, or approximately 10 percent of the population, of the US are deaf or hard of hearing. The FCC enforces broadcaster carriage of Closed Captioning (CC) information for deaf and hard of hearing television viewers.

In old analog TV, CC information is sent in four categories: CC1, CC2, CC3, and CC4. Generally, CC1 is used for English captions and CC3 is used for Spanish.

For digital TV, CC information is sent as Services. Your converter box supports six services, labeled Service 1 to Service 6. Today, Service 1 is commonly used.

A new digital TV broadcast can contain both Analog TV CC as well as digital TV CC. You have two choices in viewing Closed Caption information.

The first option is to allow the Converter Box to decode and display the analog or digital TV CC. The second option allows the TV to decode and display the Analog CC passed along by the Converter Box. Either one or the other should be used, but not both at the same time.

After accessing the "OPTION" menu, use the ▼ navigation buttons to highlight "Closed Caption", press the right ► navigation button or the ENTER button to access "Closed Caption".

See the Figure 22

Menu Operation



Figure22. Closed Caption

There are three options under the "Closed Caption" menu.

ACC - Set the analog closed caption service. There are nine options: CC1,CC2,CC3,CC4,Text1, Text2, Text3,Text4, Off.

DCC - Set the digital closed caption mode as Off, Standard or Custom.

DCC Service - Set the digital closed caption service from service 1~ service 6.

ACC (Analog CC)

The ACC (Analog CC) sub-menu provides the option of selecting which CC service should be used for the analog CC text display window. The default setting, CC1, is the correct service for almost all cases.

Press the ▲ ▼ navigation buttons to select "ACC" under the "Closed Caption" menu.

Press the ◀ ▶ navigation buttons to select the ACC service.

There are nine options: CC1,CC2,CC3,CC4,Text1, Text2, Text3,Text4, Off.

NOTE: The ACC option is available only when the "DCC" is set as "Off".

DCC(Digital CC)

The DCC (Digital CC) sub-menu provides the options of setting the DCC mode as Off, Custom or Standard.

- Off - When "Off" is selected, the DCC text is never displayed.
- Standard - When "Standard" is selected, the screen will display the standard DCC service.
- Custom - When "Custom" is selected, the DCC View sub-menu will be available for digital CC customer setting. See DCC View submenu for details

After accessing the "Closed Caption" menu, press the ▲ ▼ navigation buttons to select "DCC"

Press the ◀ ▶ navigation buttons to select the DCC mode.

Menu Operation

DCC Service

The DCC Service sub-menu provides the options for which service is going to be used in current digital CC display. There are six options from service1~ service6.

After accessing the "Closed Caption" menu, press the ▲ ▼ navigation buttons to select "DCC Service"
Press the ◀ ▶ navigation buttons to select the DCC service.

Service #1 is designated as the Primary Caption Service. This service contains the verbatim, or near-verbatim captions for the primary language being spoken in the accompanying program audio.

Service #2 is designated as the Secondary Language Service. This service contains captions in a secondary language which are translations of the captions in the Primary Caption Service.

The other service sub-channels are not pre-assigned. It is up to the discretion of the individual caption provider to utilize the remaining service channels.

Menu Operation

DCC View

The DCC View sub-menu provides the option for digital CC customer setting

This sub-menu is available only when the DCC is set as "Custom". Set the DCC as Custom under the Close Caption sub-menu.



Figure23. DCC View

After accessing the OPTION menu, press the ▼ navigation buttons to select DCC View sub-menu, press the ► navigation button or the ENTER button to access the DCC View sub-menu.

In the DCC View sub-menu, press the ◀ ▶ ▲ ▼ navigation buttons to select the option.

Sleep Mode

The Sleep sub-menu provides the option of selecting a set amount of time before the CB will automatically switch to stand-by mode. There are five sleep time options: Off and 1, 2, 4, 8 hours. A warning popup window will appear on the screen 1 minute before the set time expires to let the user know that the CB will soon enter stand-by mode. The user can then turn off this feature or set a new sleep time amount by accessing this Sleep menu before the time expires.

After accessing the OPTION menu, use the ▲ ▼ navigation buttons to highlight the Sleep Mode option, and press the ► navigation button or the ENTER button to access the Sleep Mode. Use the ▲ ▼ navigation buttons to select the sleep time.

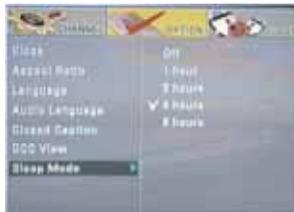


Figure24. Sleep Mode

Menu Operation

4.3 Lock Menu Features

The DTV-102 converter box module incorporates V-Chip technology to block viewing of television programs and movies according to their rating categories. V-Chip is included into TVs and other video devices to work in conjunction with the TV Parental Guidelines. It electronically reads television programming ratings and allows parents to block programs they believe are unsuitable for their children. Non-rated ratings can also be blocked. The rating categories in use include TV ratings for TV programs and MPA ratings for theatrical movies being broadcast. The Canadian English and Canadian French rating categories are also available for programs broadcast in Canada.

After pressing the MENU button on the CB remote control, use the ◀ ▶ navigation buttons to highlight the LOCK option and press the OK button. A password or PIN is needed to access and make changes in this menu. Using the number buttons on the CB remote control, enter the 4-digit password in to the Password window as shown in Figure 25 below. An "*" will appear for each digit entered.

NOTE: The factory default password is "0000" and can be changed using the Change Password sub-menu. If the new password is forgotten, it can be reset to "0000" by unplugging power to the CB module.



Figure 25. Password Window

The LOCK sub-menu has seven options: Lock System, Change Password, Block Channel, TV Rating-Children, TV Rating-General, Movie Rating, Downloadable RRT.

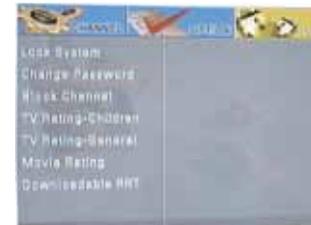


Figure 26. Lock Sub-menu

Menu Operation

Lock System

The Lock System sub-menu provides the option of setting the lock function On or Off. When On is selected, programs will be blocked based on the settings selected in the TV Rating and Movie Rating sub-menus. When Off is selected, no programs will be blocked.

After accessing the LOCK sub-menu, use the ▲▼ navigation buttons to highlight the Lock System, and press the ► navigation button or the ENTER button to access. Press the ▲▼ navigation buttons to set Lock System on or off.

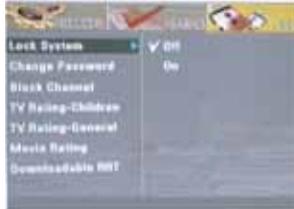


Figure 27. Lock System

Change Password

The Change Password sub-menu allows the user to change the password used to access the LOCK menu features.

After accessing the LOCK sub-menu, use the ▲▼ navigation buttons to highlight Change Password, and press the ► navigation button or the ENTER button access Change Password.

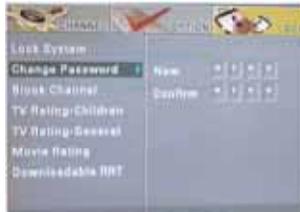


Figure 28. Change Password

A new 4 digit password can then be entered using the CB remote control number buttons, and then entered again to confirm the new Password. If a new password was previously entered and has been forgotten, it can be reset to "0000" by unplugging power to the CB module.

Menu Operation

Block Channel

The Block Channel sub-menu provides the option of blocking the specified channel. When the certain channel is blocked, it will never be viewed

After accessing the LOCK sub-menu, use the ▲▼ navigation buttons to highlight the Block Channel and press the ► navigation button or the ENTER button to access Block Channel.

Press the ▲▼ navigation button to select the channel to be blocked, press the ENTER button to block or unblock.

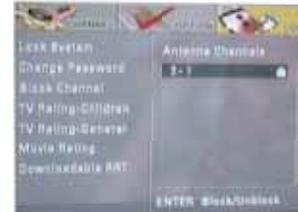


Figure 29. Block Channel

TV Rating - Children

The TV Rating-Children sub-menu allows the user to block programs for the young children based on the age rating and the content rating. It is possible to block all programs with ratings at and above a specified level, or to block programs with specified content within a selected level.

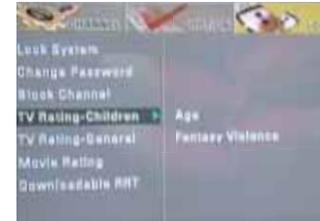


Figure 30. TV Rating-Children

The following are the descriptions for each rating:

Age Rating	Description
TV-Y	All Children Designed to be appropriate for all children.
TV-Y7	Directed to Older Children Designed for children age 7 and above. Possible content rating: FV (Fantasy Violence)

Menu Operation

After accessing the LOCK sub-menu, use the ▲▼ navigation buttons to select TV Rating-Children, press the ► navigation button or the ENTER button to access TV Rating-Children.

There are two options: Age and Fantasy Violence.

Age - Block programs based on the age rating TV-Y or TV-Y7. When TV-Y is selected, the higher program TV-Y7 will also be selected to be blocked.

Fantasy Violence - Block programs with the fantasy violence content.

Press the ► navigation button or the ENTER button to access the options, press the ▲▼ navigation buttons select the rating. The block indicator will be added to the specific rating. To release all block, select Blocking Off in the menu.

When the CB receives broadcasts of those locked programs, the CB will block both video and audio signals to the output, and a suggestive message will appear on the screen. Entering in the password will temporarily override the block settings for this program so that it can be viewed.

TV Rating - General

The TV Rating-General sub-menu allows the user to block programs for general audience based on TV ratings, including age-based ratings and content sub-ratings for violence, language, sexual situations and suggestive dialog. It is possible to block all programs with ratings at and above a specified level, or to block programs with specified content within a selected level.

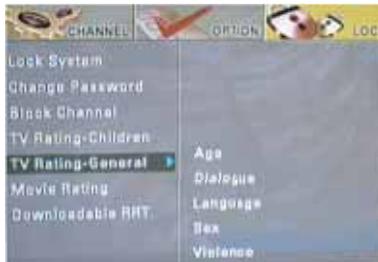


Figure 31. TV Rating-General

The following are the descriptions for each rating:

Menu Operation

Age Rating	Description
TV-G	General Audience Most parents would find this program appropriate for all ages.
TV-PG	Parental Guidance Suggested Contains material that parents may find unsuitable for younger children. Possible content ratings: D, L, S, V
TV-14	Parents Strongly Cautioned Contains some material that many parents would find unsuitable for children under 14 years of age. Possible content ratings: D, L, S, V
TV-MA	Mature Audience Only Specifically designed to be viewed by adults and therefore may be unsuitable for children under age 17. Possible content ratings: L, S, V

Content Rating	Description
D	Suggestive Dialogue
L	Coarse Language
S	Sexual Situations
V	Violence
FV	Fantasy Violence

NOTE: When a specific age or content rating is selected, all settings above that rating will also be selected to be blocked.

After accessing the LOCK sub-menu, use the ▲▼ navigation buttons to select TV Rating-General, press the ► navigation button or the ENTER button to access TV Rating-General.

There are five options: Age, Dialogue, Language, Sex, Violence.

Age - Block programs based on the age rating .

Dialogue, Language, Sex, Violence - Block programs based on the content rating.

Press the ► navigation buttons or the ENTER button to access the options, press the ▲▼ navigation buttons to select the rating. The block indicator will be added to the specific rating. To release all block, select Blocking Off in the menu.

When the CB receives broadcasts of those locked programs, the CB will block both video and audio signals to the output, and a warning window will appear on the screen. Entering in the password will temporarily override the block settings for this program so that it can be viewed.

Menu Operation

Movie Rating

The MPAA Rating sub-menu allows the user to block broadcast movies based on the MPAA (Motion Picture Association of America) ratings, which are age ratings based on violence, language and sexual content. It is possible to block all movies with ratings at and above a specified level. It is also possible to block un-rated movies, such as MPAA Not Rated movies.



Figure 32. Movie Rating

The following are the descriptions for each rating:

Age Rating	Description
NR	Not Rated by MPAA
G	General Audience Suitable for all audiences.
PG	Parental Guidance Suggested Some material may not be suitable for children.
PG-13	Parents Strongly Cautioned Some material may be inappropriate for children under age 13.
R	Restricted Under age 17 requires accompanying parent or guardian.
NC-17	No One 17 and Under Admitted Some material is intended to be viewed by adults only.
X	No One 17 and Under Admitted Some material is explicitly sexual and is intended to be viewed by adults only.

NOTE: When a specific rating is selected, all settings above that rating will also be selected to be blocked.

After accessing the LOCK sub-menu, use the ▲▼ navigation buttons to select Movie Rating, and press the ► navigation button or the ENTER button to access Movie Rating.

Menu Operation

Use the ▲▼ navigation buttons to select the desired rating to be blocked. All ratings above this level will also be marked to be blocked.

For example, if it is desired to block all PG-13 movies:

Select PG-13 using the ▲▼ navigation buttons. The lock indicator dots will be added to all PG-13 and higher categories.

NOTE: All PG-13 and higher movies will be blocked. When the CB receives broadcasts of those movies, the CB will block both video and audio signals to the output, and a suggestive message will appear on the screen.

Entering in the password will temporarily override the block settings for this program so that it can be viewed.

Downloadable RRT

The current V-Chip recognizes the current RRT, which is communicated as part of the Program and System Information Protocol. It depends on broadcasts which could communicate a new rating system via the PSIP that both the chip and a TV's software can understand. With downloadable RRT, blocking of program shall occur when a program rating is received that meets the pre-determined user requirement. User could program the open V-Chip with numbers of filters that go beyond the general descriptors.

Reference

This chapter discusses ways to troubleshoot the DTV-102 converter box and provides the module specifications.

5.1 Troubleshooting Guide

If you are experiencing problems with the DTV-102, see Table 1 for available solutions.

Table 1. DTV-102 Module Troubleshooting

Symptom	Solution
No power	<p>Make sure the power supply is securely plugged into a standard wall outlet and the cord is plugged into the power connector on the CB module.</p> <p>Make sure the CB module is turned on using the front panel power button or the remote control power button.</p>
CB is not responding to the remote control	<p>Make sure to point the remote control directly at the remote control sensor on the CB, with no obstacles in between them.</p> <p>You may be too far from CB. Try moving closer.</p> <p>Make sure that the remote control batteries are installed in the correct direction (+ and -).</p> <p>The batteries may be depleted. Try replacing them with new ones.</p> <p>Verify CB is operating correctly by pressing buttons on the front panel of CB.</p>
No picture	<p>Make sure that the antenna in cable is correctly connected to the CB.</p> <p>Make sure that the video out cable is correctly connected to the CB and TV.</p> <p>Make sure that the CB and TV are turned on.</p> <p>Make sure that the TV is correctly set to the selected CB video output channel.</p> <p>Refer to the TV owner's manual for further information.</p> <p>Check the antenna and the antenna cable. There may be damage or interference sources.</p>
Picture is blocky or not clear	<p>Check the antenna and the antenna cable. There may be damage or interference sources.</p> <p>Reposition the antenna to improve signal strength. Signal strength can also be affected by rain or snow. In the USA, the website www.antennaweb.org can provide help in determining the best antenna orientation.</p>
No sound	<p>Make sure that the audio cables are correctly connected between the CB audio outputs and the TV audio inputs.</p> <p>Make sure that CB and TV are turned on.</p> <p>Make sure the CB and TV volume settings are at a reasonable level.</p> <p>Make sure that the MUTE function is not activated on the CB or TV.</p> <p>Make sure the TV is correctly set to the selected CB audio output channel.</p> <p>When TV has only one audio input jack, use a standard audio cable (white) to connect the audio output jack (white) on the CB to the audio input jack on the TV.</p> <p>The red audio cable and the CB red audio output jack are not needed.</p>

Reference

All digital channels are not received	<p>Make sure that the Auto Program process in the Channel menu has been completed. It will be required when you setup the CB for the first time or when the CB is moved to a location where other channels are broadcast.</p> <p>The selected channel does not exist at the time. There are not always sub-channels being broadcast.</p> <p>When the Auto Program process is interrupted and not completed, some channels will not be received. Make sure to complete the Auto Program process in the Channel menu.</p>
CC display stays on or two sets of captions are shown	<p>Make sure the CB CC mode is set to Off.</p> <p>Make sure that the TV's CC display is turned off. Refer to the TV owner's manual for further information on how to turn off its CC feature.</p>
Forgot the PIN for V-Chip	<p>Unplug the AC power cord and wait for approx. 5 seconds, then plug in the power cord. In the V-Chip menu, enter the default number "0000."</p>

5.2 Specifications

Product

Converter Box for ATSC to NTSC

Connecting Jacks

ANT IN

F connector (75 ohm)

ANT OUT

F connector (75 ohm)

Video Output

1-pin RCA jack, 1Vpp, 480i composite

Analog Audio Output

2-pin RCA jack (L, R), 450 mVrms (100k ohm)

RF Input

DTV standard ATSC

Channel Coverage

Terrestrial: 2-69

Power Source

100-240 VAC, 50/60 Hz +/-0.5 %

Power Consumption

w/o smart antenna, 8W (Power on),

Operating Condition

41 F° (5 C°) - 104 F° (40 C°)

Board Dimensions

(241 mm x 168 mm x 43 mm)

Weight

425g

Accessories

Remote Control 1 (Provided)

Batteries (size AAA) 2 (Provided)

RF cable 1

RCA cable

(Video+Audio L/R) 1

Designs and Specifications are subject to change without notice.