Denver DVBC-120 Guide (English)

Digital TV receiver (set-top box) for cable TV (standard definition and HD)

This guide consists of two parts. First, a straightforward installation procedure, followed by a guide to the many functions available, some of which are undocumented.

The Denver DVBC-120 is an easy-to-use and capable set-top box for cable TV reception. It supports both standard-definition and high-definition broadcasts and makes it easy to skip commercials, both in recorded programmes and in live TV using timeshift. No more viewing endlessly boring meaningless commercials, those days are forever gone. Just skip them!

Unfortunately, the box comes with one of the weakest user manuals on the market. As a result, many users never discover any of a number of useful features. Initial setup can also be unnecessarily difficult, especially when switching from standard signals to HD, for example if the cable provider changes distribution formats.

1. INSTALLATION

This guide assumes that the set-top box is connected to the TV, the antenna outlet, and the power supply.

Step 1.1 Select language

Once you have selected the correct input source on your TV, the installation process will begin. Start by selecting the desired language using the left/right arrow buttons on the remote control. Confirm with OK.

Step 1.2 Select frequency and network ID

The set-top box will now attempt an automatic channel scan but will not find any channels. You may see messages such as "*No signal*" or "*No channels found*". This is as expected.

To proceed, you must perform a manual network configuration.

Press MENU on the remote control to open the settings menu. Navigate to the third option in the left-hand menu (satellite dish icon), then select *Network Search*.

Under *Provider*, select *Manual* (press the left arrow once). Swedish cable providers are not listed. If yours are not either, the manual option must be used.

Enter the correct *Network ID* for your region (available from your cable provider). Also set the frequency to 362 MHz (for Tele2 Sweden, otherwise consult your provider).

Step 1.3 Search

Start the channel scan. Each channel position will be marked as …OK or …Fail depending on whether a signal is found. Encrypted channels are skipped automatically, provided that *Channel Type* is set to *Free* under *System Setup*.

Step 1.4 Sort channels

Channel sorting is described in Part 2 of this guide.

Step 1.5 Insert USB storage device

It is strongly recommended to connect a USB storage device (typically a USB flash drive, although external hard drives often work as well). This enables access to the advanced recording and timeshift features.

Note that the USB ports provide limited power. Some external drives may therefore not function correctly. In such cases, the message "*USB space too low for action*" may appear, even though the issue is insufficient power rather than lack of storage.

2. OPERATION

All menu names are given exactly as they appear on screen, including misspellings.

2.1 Settings

2.1.1 System Setup (cogwheel in the left menu)

TV System → Video Resolution. Select the resolution that gives the best picture on your TV. If unsure, try the different options using the arrow buttons. Be aware that some settings may temporarily result in a black screen. Do not exit this menu until a working setting is found.

TV System → Aspect Mode. Select Auto. This ensures that the box automatically switches between 16:9 (wide) and 4:3 (old narrower) formats depending on the programme signal.

Display Setting. Most image settings are best adjusted on the TV itself, but sharpness should be set here. Start with a value of 6 and adjust as needed.

PVR Storage Information. Displays available USB storage. Approx. 3 GB/hour (SD MPEG-2) and 5 GB/hour (HD MPEG-4). Use the blue button (*DVR Set*) on the remote control to select REC & TMS so that both recording and timeshift are enabled.

The box divides the unrecorded storage into approximately 2/3 recording and 1/3 timeshift. Due to a supposed firmware bug, those proportions sometimes become very different. After deleting a recording, the box at times adds all released storage to the recording count and none to timeshift, thus disregarding the prescribed storage ratio. After turning the box off and on again, the storage sizes are correctly recalculated.

To make sure that a planned recording fits, check the information prior to recording. Also note that in some cases, especially when the storage capacity runs low, there is a calculation error such that Free Size does not equal Rec Size + TMS Size.

PVR Setting. Set *Timeshift* to *ON*. Set *Jump* to 30 seconds for convenience and precision when skipping commercials. This setting applies to both timeshift and recorded programmes. Also set *Timeshift to Record* to *ON*, which enables recording of a timeshifted programme.

Other. If the option *Loopthrough in Standby* is visible, the latest firmware is installed. This allows antenna signal passthrough when the box is off, albeit with extra power consumption.

2.1.2 Installation (satellite dish in the left menu)

Network Search. Do not select any preconfigured providers. Use *Manual* mode instead. Set *Frequency* to 362 MHz (in Stockholm, you must check your local provider's webpages) and *Scan QAM* to 64-QAM (surprisingly also for searching 256-QAM HD channels). Enter *NetWork ID* and start the search. Note that existing channels are not automatically removed. To remove them, go to *Edit Channel* → *Delete All*.

2.1.3 Edit Channel (TV screen in the left menu)

TV Channel List. Channels can be reordered using the arrow buttons. Press the yellow button to enter move mode, select a channel, move it, and confirm with OK. Save with EXIT. A firmware bug prohibits custom naming of channels even though the user interface allows it.

LCN (Logical Channel Number). If the numbering from the provider (as interpreted by the box) is inconvenient, turn *LCN OFF*. After sorting, channel positions will correspond directly to remote control buttons. Note that whenever *ON* is selected, the user sorting is irrevocably deleted and must be reentered.

2.1.4 Media Player (play button in the left menu)

The Media Player is mostly used for viewing recorded programmes, see Section 2.4. The function in *Media Player* → *Video* and *Media Player* → *Image* to rename any of the connected USB devices is ineffectual.

2.1.5 Large OSD panel

The large OSD (on-screen display) panel appears when starting to record, pressing INFO or pausing playback. Press EXIT to hide it during pause or single-frame stepping. During recording or playback, the panel shows, in the lower right corner: start sector on USB device (zero on playback) and data rates for playback and recording (both are non-zero for timeshifted recording), plus "TS". Above the numbers is a bar showing the usage of the USB device in percent.

2.2 Timeshift

Timeshift allows you to pause live TV. Press || to pause and PLAY to resume. The programme is temporarily buffered but not saved permanently. This is very convenient for skipping commercials in live TV broadcasts. Just pause to build a buffered cushion and then skip the commercials by holding NEXT as long as necessary. A timeshift that was accidently stopped can be resumed by pressing PREV as long as the channel is not changed. In paused mode, press || repeatedly to advance frame by frame (press EXIT to hide OSD).

2.3 Recording

A USB storage device is required.

Timer recording. Found under *System Setup* → *Timer Setting*. Select one of the eight timers, then choose timer mode *Once* (to record at the same time every day, select *Daily*). It is important to set *Timer Service* to *PVR* (the *Channel* option only wakes the box up from standby; no recording is made). The remaining settings are largely self-explanatory.

When the recording starts, the message "*Event notified*!" is displayed, followed by the somewhat unclear "*Rec hint: waiting to play prog*…". If the box is in standby, it will automatically power on one minute before the recording begins (albeit at the latest channel shown).

Important! If the box is showing a live TV channel, a recorded program, or a menu, this will be interrupted when the recording starts. However, during timeshift or REC, the timer is canceled without any warning and no recording is made. If a scheduled recording "disappeared" or "did not occur," this is very likely the cause.

Instant (one-touch) recording (OTR). Press REC to start immediate recording. Default duration is 2 hours. Adjust by pressing REC twice, entering the new duration, and press REC again to commit the new value, which can now be seen on the OSD panel.

Timeshift recording. By pressing the REC button during timeshift, the entire program is recorded starting from the beginning of the timeshift buffer, not just from the moment the button is pressed. The recording duration and other settings are then selected in the same way as for instant recording (OTR). This means you can start watching a program using timeshift if you are unsure whether you want to record it. If you later decide to record, the entire program from the beginning will be included.

A timer or instant recording can in turn be timeshifted by pressing || or the PREV button on the third row from the bottom on the remote control. This does not affect the recording itself, but the timeshift ends when the recording reaches its scheduled end (for timer, not OTR). Timeshift is stopped by pressing STOP (white square) once, after which the recording returns to its normal mode. However, pressing it again will terminate the recording.

Duo-prog. During recording via timer or REC, another program can often be viewed simultaneously. Select the program to view using the up and down arrows on the remote control after starting the recording. However, there are a number of firmware problems in this function. Only a few programs with channel numbers close to the one being recorded can be viewed. In addition, this channel order follows the box's internal order, not the user-defined sorted order; in other words, the normal channel sorting is temporarily overridden. As a result, a very useful feature when two programs overlap in the TV schedule is unnecessarily restricted. However, if you keep track of the channel order (clusters) in the unsorted list, this function can still be useful. This feature is not available in older firmware versions and may be worth an update.

2.4 Playback

Recordings are accessed via *Media Player → PVR*. During playback, keep PREV/NEXT depressed (or press repeatedly*) on the remote control for shorter skips (up to around 10 minutes), mainly for skipping commercials. Inconvenient for longer jumps, see below instead.

For longer jumps, press INFO and then navigate along the OSD timeline using the left/right arrow buttons, then confirm with OK. A yellow marker will show where the playback will resume. This maneuver is somewhat time critical click-wise and requires a bit of training.

* = for HD programmes, the box might not have the capacity to show every frame in skip mode.

2.5 Firmware

If you do not experience problems with the box, updating the firmware is not recommended. It comes with certain possibly fatal risks. Experiencing a delay when switching HD channels (as opposed to standard) is unfortunately a function of the hardware and not remedied by an upgrade. However, if you experience other problems, it might be worth a try, especially if your firmware version is DENVER_V1.1_12-10 or earlier. This could also be the case if your box does not allow Duo-prog. The current version in the box is found at *Tools → Information*.

To replace the firmware, follow the instructions on the Denver website. Make sure not to unplug the mains power during the installation – that will leave the box in an intermediate state. Also make sure to use a completely empty USB stick, except for the firmware file. If unlucky, the update will stop with "*Burn flash error at xx%*" which might also leave the box in an intermediate state. In this intermediate (indeterminate) state, there seems to be at least a 50% chance that the old firmware has been deleted but with no complete new one in place, in which case the next destination for the box might be the waste bin since it might have become unsalvageable. For these reasons, this guide does not encourage firmware updates but remains neutral, leaving the decision up to each individual box owner's discretion. At the time of this writing, the newest firmware is DENVER_V1.1_17-6.

2.6 Final comments

Overall, the Denver DVBC-120 is a surprisingly capable set-top box with features often found only in more expensive boxes. A few annoying firmware problems can surprise, such as sudden unwanted subtitling (removed by pressing SUB-T on the remote). There are some firmware limitations, such as lack of recurring weekly recordings and slower channel switching in HD. The latter is presumably due to hardware speed, but given the price range, the overall performance is still very good. And it is truly a mighty commercial killer.

For more details on hidden or undocumented features, refer to the Swedish version of this guide. Its more elaborate descriptions (except for firmware update which is not covered) can be easily translated to a language of your choice by e.g. Google Translate. The Swedish version is found here (or search the internet if it has moved).

Please note: All advice given in this document is provided "as is", in a friendly manner, to help understand the DVBC-120 box. There is no guarantee that your experiences match those described in this guide. Different firmware versions, reception conditions, or any other factors (such as country or cable provider) might influence your experiences in ways that are impossible to foresee. Further, this guide is in no way affiliated with the manufacturer of the box. The firmware oddities described in the document are in the eyes of the author who has not worked with the manufacturer.