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Advanced Installation Guide



Welcome to Zv!

Thank you for your purchase of ZvBox and the Zv-100 bundle.

The *Get Going Guide*, which came with your purchase, has instructions for nontechnical users to get ZvBox up and running. It is very important for us to make ZvBox and Localcasting easy to experience for new users.

But if you're a more advanced user, this guide provides some other alternatives that may fit your needs better.

Along the way, feel free to log onto our online Forums to discuss your questions and suggestions with the Zv community. If you still can't find the answers you need, our technical support hotline can be reached at 877-4ZEEVEE (877-493-3833).

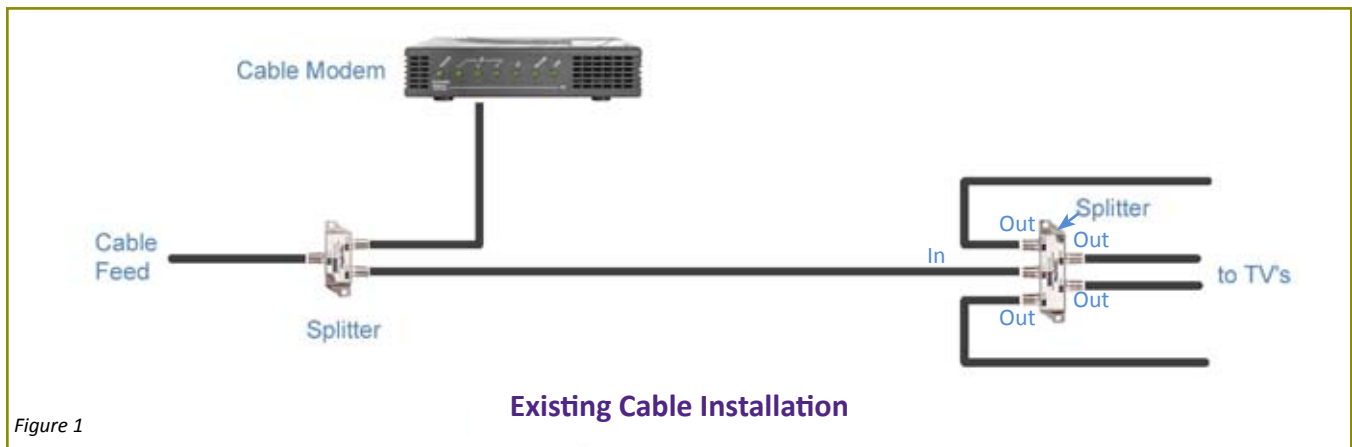
Advanced Installation of ZvBox

If you are a more advanced user, the standard installation may not be best for you if any of the following apply:

- You have or can install a direct coaxial cable connection from ZvBox to the root of the coaxial cable network.
- You would like to configure ZvBox with a dedicated and unattended Media Server PC.
- You do not want to drop channels with the supplied channel block filter.
- You have a large home and the TV coaxial cable outlets are fed by distribution amplifiers.

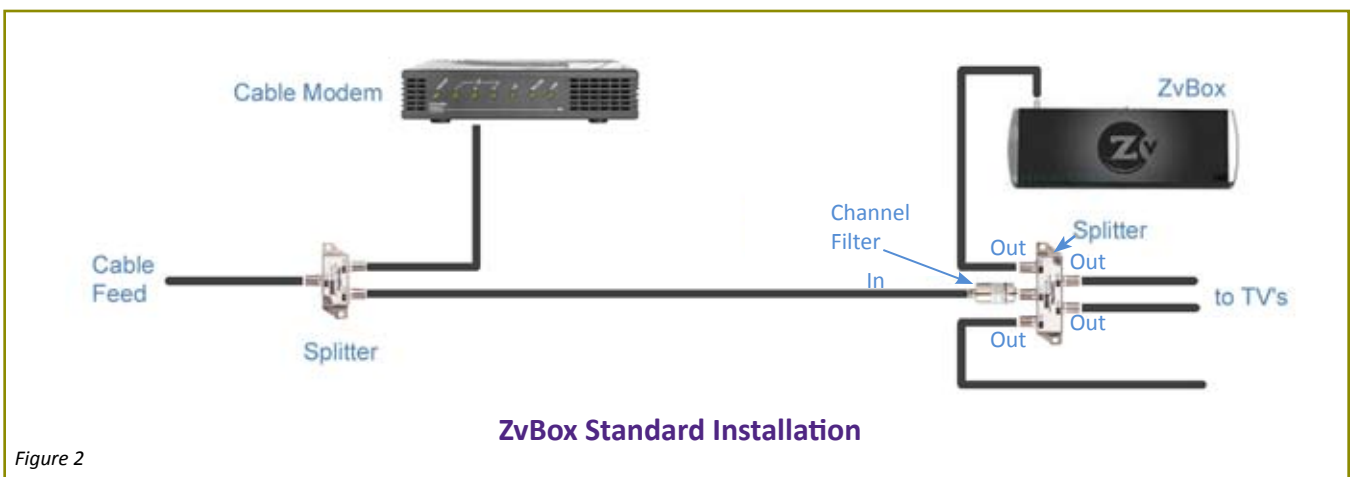
Standard Installation

Here is a typical cable installation before ZvBox has been installed:



In a standard installation, ZvBox Localcasts into the coaxial cable distribution tree in the reverse direction from any outlet in the home. The Localcast signal travels back towards the root of the tree until it is reflected off the supplied filter then reverses direction to travel forward so it can be received at the remaining coaxial cable outlets in the home. The filter also insures that the Localcast channel is confined within the home.

Place the channel block filter as close as possible to the splitter. If possible, connect it to the splitter input as shown in Figure 2 below.



Feed Forward Installation

In a feed-forward installation, ZvBox is connected to the root of the coaxial cable network, using a 2:1 splitter as a combiner (see Fig. 3 below). The Localcast channel that ZvBox creates is simply added to the channels that come from the cable provider.

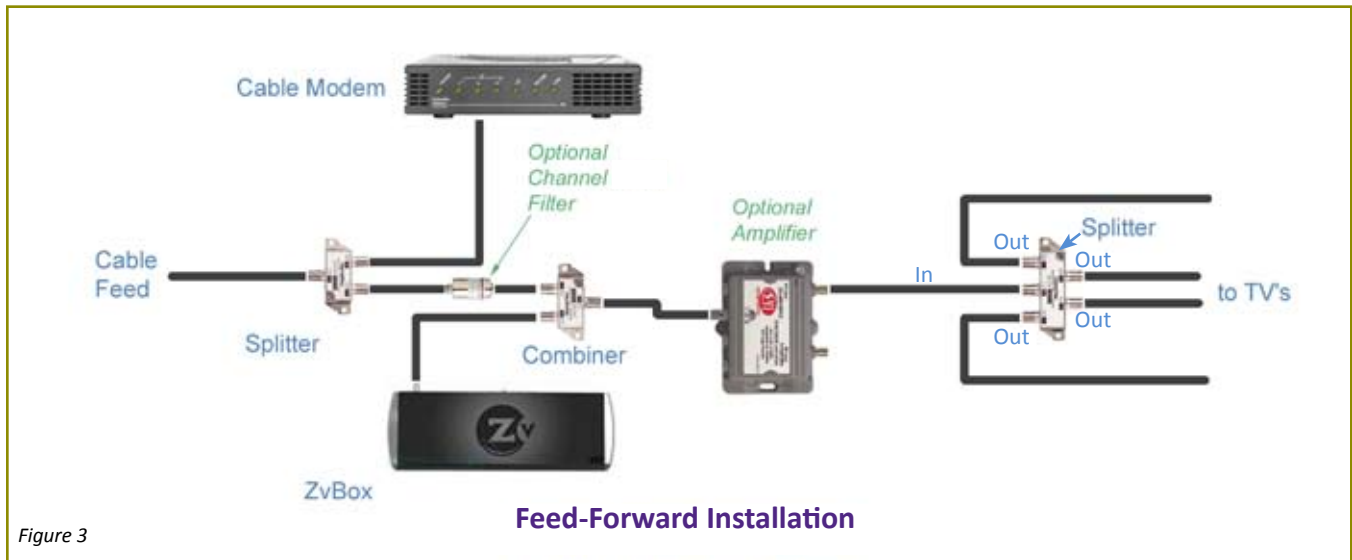


Figure 3

ZvBox is capable of creating a Localcast channel on any unused channel slot. During setup, ZvBox scans all 135 channels to determine which channels are in use and creates a log. In a text viewer application such as Note Pad, open the TVRF.OUT file, located in the ZV folder on your hard drive, then find an open channel frequency:


Channel	Mod	FreqHz	FreqOffsetHz	FreqEnergy
2	qam_std	55250000	57000000	0
	0	open		
3	qam_std	61250000	63000000	0
	0	open		
4	qam_std	67250000	69000000	0
	0	open		
5	qam_std	77250000	79000000	0
	0	open		
6	qam_std	83250000	85000000	0
	0	open		
95	qam_std	91250000	93000000	0
	0	open		
96	qam_std	97250000	99000000	0
	0	open		
97	qam_std	103250000	105000000	0
	0	open		
98	qam_std	109275000	111025000	2
	0	ntsc		
99	qam_std	115275000	117025000	0
	0	open		

Figure 4

During setup, when prompted to enter the Broadcast Channel number (i.e., 125, 135, or "Other") choose "Other" and enter the broadcast number you selected from the log. Avoid selecting channel 97 as many cable companies use that channel to transmit data.

If all channels are used then a Channel Filter must be installed to make room for ZvBox's Localcast channel. If there is a spare channel then no channels need to be dropped and no filter is needed.

Special Considerations for Feed-Forward Installations

1. ZvBox's transmit level should be reduced by right-clicking on the  in the system tray while simultaneously pressing CTL, SHIFT, Z, and V. Then set RF Power to Lowest on the Debugging Options menu. This reduces the possibility that ZvBox's Localcast channel will be so strong that it interferes with adjacent channels.
2. The 2 to 1 splitter that is used as a combiner will reduce the signal levels somewhat to all the coaxial cable outlets. If the coaxial cable distribution system delivered very low signal levels to begin with, then this further reduction might prevent full cable reception at some outlets. If you find that this is the case, a distribution amplifier (shown above) should be added to restore adequate signal levels. The splitter/combiner will reduce the signal level by 3.5 dB, so an amplifier that produces at least that much gains should be used.
3. As you know, from time to time the cable provider may add and delete channels. When this occurs it is possible that the channel ZvBox uses may not be empty anymore, and ZvBox's Localcast use of a channel will interfere with the cable company's broadcast use of the same channel. Each time ZvBox starts Localcasting it first checks that the channel it uses is available. If it is not, ZvBox informs the user and, if so directed, will find a new available channel. If no available channels are found then a channel block filter is required make room for ZvBox's Localcast channel.
4. When connected in the Feed-Forward Configuration (see Figure 4) using a 2 to 1 splitter as a combiner, Zv-Box may have trouble detecting weak channels during its channel scan. This occurs because the only signal path from the cable feed to ZvBox is the unintended coupling between the two inputs of the combiner. This could cause ZvBox to miss a weak channel during its scan and mark it as available, even though ZvBox is able to detect very weak signals. Although unlikely, if you suspect that this has occurred because you are having trouble receiving the Localcast channel that ZvBox has chosen, use Setup to instruct ZvBox to choose a different channel. If this is still unsuccessful, simply disconnect the coaxial cable from the combiner output (the side with a single connection) as shown in Figure 4. Then using Setup, instruct ZvBox to do a full channel scan and choose a new channel. Removing the combiner output will increase the signal level that couples from the cable connection to ZvBox connection in the splitter. Finally, just reconnect the coaxial cable that you removed from the combiner output.

