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ANALOG CHANNELS ONLY BEING RECEIVED

- How to determine if the screen is showing digital or analog:
 - o Analog channel numbers are whole integers: 2, 4, 6, etc.
 - o Digital channels are hyphenated 2-1, 4-2, 6-1, etc.
 - o Check the number that's briefly displayed on the screen.
 - o Snow, ghosts or fluttering mean analog.
 - o Pixelation (frozen squares) or audio dropouts mean digital.
 - o If you see traditional TV snow you're almost certainly NOT watching anything digital.
- Most new digital TVs have both analog and digital tuners.
 - o You've probably inadvertently activated the analog tuner.
 - o Switch back to the digital tuner via a button on your remote.
 - Some sets may require going into the on-screen menu.
- A converter box with analog pass-through provides analog in one of two ways:
 - 1) passing analog through the box when turned off; or
 - 2) switching between analog or digital via the remote or the menu.

Be sure the box is <u>NOT</u> set to analog pass-through.

ANALOG PASS-THROUGH: MAKING A NON-ANALOG PASS-THROUGH BOX WORK

- If you need an analog pass-through converter box but have bought a box without it, you can do a simple work-around using a "splitter."
 - A splitter costs a few dollars and splits the single antenna line into two lines.
 - One goes directly to the TV for analog channels, which are then selected via the TV and its remote.
 - The other goes to the converter box for digital channels, tuned via the box remote and with the TV itself tuned to channel 3.

AUDIO VANISHES ON SOME PROGRAMS, BUT FINE ON OTHERS

- The audio setting has probably been accidentally changed from its factory setting.
 - o Check the audio settings using the "audio" button on the converter box remote or by going into the on-screen menu.
 - o Choose the first or main or primary audio service, *not* any secondary or later service.
- Not all programs have secondary audio channels, and OPB uses them more than any other station

 that's why the problem only occurs on some programs.

BLACK BARS ON EDGES OF PICTURE

- Analog programs, digital programs and high-definition digital programs are created using different proportions (called the *aspect ratio*) for the picture.
 - o Programs in different formats can appear on the same channel.
 - o Since the proportions of the TV screen itself are fixed, programs are sometimes re-sized in an effort to standardize them.
 - o Black bars may be added to the sides, or above and below the picture.
- You can change the display format using the "zoom" or "format" button or similar settings in the on-screen menu.
 - o An "automatic" or similar setting will choose the ratio appropriate to each program, but that may not always be your preference.
 - o Expansion of the picture to a full screen might either move part of the picture off-screen and out-of-sight, or stretch and distort the image. Cycle through the options and choose the one you prefer.
 - o Check your manual under "display," "aspect ratio" or "settings."

BLACK BOX COVERS THE SCREEN

- The closed captioning setting is improperly set. Be sure that it's set to "Off" or "Service 1" or something similar.
- The box is trying -- unsuccessfully -- to translate a secondary captioning service and the result is a black area of confusion. Check your manual.

CABLE AND SATELLITE CHANNELS

- Cable and satellite providers are only required to carry the main channel from each of the local broadcasters.
- Every station would love for them to carry every sub-channel, but the choice is up to the provider. If you are concerned, you should call your company and let them know your feelings.

CLOSED CAPTIONING DOESN'T WORK

- It may be turned off the factory settings often have it set in the off position, so they may need to be changed.
- If there's not a button labeled "cc" or "Captions" press the menu button -- most likely the settings for closed captioning will be under "options."
- Set CC to "on."
- Many boxes also allow you to set the size, location, color, border, font and other features of CC.
- If closed captioning is present, but it doesn't correspond to the program, be sure that "Service 1" (or a similar name) is chosen. Check your manual.

CONVERTER BOX TURNS ITSELF OFF

- All converter boxes come with an energy-saving feature that turns them off if no button is pressed on the remote for 4 hours.
 - o This setting can be changed or disabled altogether.
- For Digital Stream: Go to Function -> Time -> Power Down to change the setting.
- For Zenith/Insignia: Press the *Sleep* button to reset
- For RCA: Press *Menu*, then choose -> *Settings* -> *Power Saver-3* to reset.

LOST CHANNELS THAT WERE PREVIOUSLY RECEIVED

- You need to rescan for channels if you use an antenna, whether you have a digital TV or an analog TV with a converter box.
- Many (though not all) stations will have changed their digital frequencies during the day on June 12.
- Any digital tuner which has not been rescanned will retain the old, out-of-date channel locations; those stations will be lost.
- A rescan will bring it up-to-date and should restore channels.
- If the loss of channels is also accompanied by "snow," the TV has probably been changed from channel 3 to another channel.
 - o If the converter box is connected via the coaxial cable, the box output and the TV channel must match (usually on 3).
 - o If they don't match, no digital channel can be displayed, and (at the very best) only a snowy digital channel will appear.

MISSING DIGITAL CHANNELS COMPARED TO ANALOG CHANNELS

- Move your antenna to a higher or better position using the signal-strength meter for feedback and rescan for channels.
- If your last scan was before the digital switch during the day on June 12, you need to update the tuner by rescanning, whether it's in a digital TV or in a converter box.
- Be sure that your antenna is a combination VHF *and* UHF.
- If rescanning and adjusting the antenna have not improved things, you probably need to upgrade the antenna.

PIXELATION OF DIGITAL CHANNELS

- If the picture freezes, audio drops out or distorted colored squares appear, the signal received by the antenna is not quite strong enough.
 - o These symptoms are the digital version of snow, ghosts and fluttering.
 - o Signal strength needs to be increased.
- Try adjusting the antenna's elements (assuming it's indoors).
- Use the signal strength meter in the on-screen menu to help find the antenna position that produces the strongest signal level on a channel that is causing trouble.
- A signal may be better at some times of day than others (because of weather and temperature) there's not much that can be done about this. Moving and/or upgrading the antenna is most likely the solution.
- www.antennaweb.org is the place to go for more antenna information and advice.

POINTING THE ANTENNA CORRECTLY

- Digital reception is less forgiving than analog when an antenna is not correctly pointed towards the transmitter.
- <u>www.antennaweb.org</u> is a great site that will determine the distance and exact direction from any address entered. It has additional information about antenna choice and which local broadcasts a viewer can expect to receive.

PROGRAMMING THE CONVERTER BOX REMOTE

What it can do

- The box remote comes completely programmed to control everything in the converter box itself.
- Some converter box remotes can also be set up to turn the TV on and off.
 - This feature is for convenience <u>only</u> -- it has nothing to do with actual reception or <u>any</u> function of the box.
 - In all cases, the TV remote will function as before.
 - Some manuals may make it seem like programming the remote is necessary. It is not. It simply allows a single remote to turn both the TV and box on and off.
- Many other converter box features, like PIN numbers and other options, are incidental to actually watching digital TV channels.

How to Set It Up

- Note: Not all boxes have this feature: Apex, Magnavox, Philco, among others.
- In order to be able to turn your TV on and off, the converter box remote needs to know the code number which identifies your particular TV model.
- Different boxes have different methods for the procedure.
 - This may involve a trial-and-error process until the correct code number is hit upon.
 - You may hold down one button continuously while pressing another every few seconds until the TV responds.
 - It can require up to 150 random guesses by the remote, and therefore, some patience. It's like waiting for your name to be called randomly in a group of 150 people.
 - Consult the owner's manual for the steps for your particular box.

REMOTE FOR CONVERTER BOX NOT WORKING

- Be sure the batteries are correctly inserted and that their plastic coating has been removed.
- Be sure the remote is pointed at the box, not the TV.
- If the remote will turn off the box, then the problem is likely to be:
 - o The TV is not tuned to channel 3.
 - o The box output is not set to channel 3.
 - o The cables are not correctly connected.

RF MODULATOR CONNECTIONS WITH A DVD

- When a television has no AV (red, yellow & white) inputs at all, or none that are compatible with a DVD player/recorder, an RF modulator is used, allowing a connection to the TV's coaxial cable antenna connection.
- The RF modulator converts the output of a DVD player (or camcorder or video game) into a channel 3 or 4 signal that is compatible with a TV's cable or antenna input.
- Order of connections:
 - Antenna to Antenna In on converter box.
 - o Converter *Out to TV* to RF modulator *In*.
 - o DVD connects to *In* via A/V cables on the RF modulator.
 - o Modulator connects to Antenna In on TV.

SETTING THE TV ON CHANNEL 3 OR 4

- The TV and converter box communicate by being on the same channel.
 - o Channel 3 is usually used in most communities (Bend uses 4) since it's an unused broadcast channel.
- It's often necessary to enter "0-3," not just "3."
 - o In some cases adding channel 3 may require consulting the manual for the TV to find out how to manually enter a channel for that model.
- Using the channel up or down button will probably not access channel 3 unless it's been previously programmed into the TV set's memory.

SIGNAL STRENGTH METER, FINDING AND USING IT

- Converter boxes have a signal strength meter that can be displayed on the screen. The meter is extremely useful when trying to find the best antenna position.
- Tune to a channel that's not coming in well, bring the meter up on the screen, and adjust the antenna and its parts until the highest possible reading on the meter is found.
 - o For Digital Stream: Press the *Meter* button on the remote.
 - o For Zenith/Insignia: Press the Signal button on the remote.
 - o For RCA: Press Menu, then choose Settings, then Antenna-4.
 - o For Philco/Magnavox: Press Setup, then select Channel, then Antenna.

SNOW IN THE PICTURE

- Snow is a product of analog. Pixelation is a product of digital.
 - o A picture with snow is analog and not digital, and almost certainly means that what's on the screen is NOT the output of the converter box.
- Be sure the light on the front of the box is green or blue.
- Most likely the solution is to tune the TV to 3 or change the box output to 3. (In Bend, both should be on 4.)
- If there's a switch on the back of the box, be sure it's also set to 3.
 - O Some boxes (Zenith, Insignia, Philco, Magnavox, others) do not have switches for channel output; they use the on-screen menu. Channel 3 is usually the default.
- If channels above are right, be sure all the connections are correctly made and tight. Carefully walk through the steps in the manual again, one by one.
- Press the menu button once all of the above are correct.
- If the menu doesn't appear, press the "video/antenna" or "line/antenna" or "video/RF" button (or a button with similar wording) several times, allowing ten seconds between.
- Read the troubleshooting section in your owner's manual.

STILL NOTHING WORKS -- what to check

- Be certain the TV set itself -- <u>not the box</u>, or the VCR or the DVD, but the TV set itself, via the TV remote or the set's own buttons, knobs or dials -- is really tuned to channel 3 and the output of the box is on that same channel.
- If the three color-coded A/V cables are being used to connect the box to the TV, you need to be using the input selector on the TV remote to choose between the TV input options.
 - o Look for TV remote buttons with words like Line, Input, Video/Antenna, etc.
 - With the box on, move through the options using the TV remote until the box menu appears on the screen.
- Be sure the box is on, and that the box remote is being used for *everything* except turning the TV on/off and setting the channel on the TV (NOT the channel on the converter box).
 - o The box remote selects digital channels. The TV and its remote cannot do this.
- Be sure the box remote is actually working by using it to turn the box on and off.
 - o If it won't do that, be sure the batteries are installed correctly, in the right direction and with their plastic coating removed.
- Go back through the set-up process in the manual, checking each step.
- Go back and redo the connections, following the manual.
- Call or go back to the retailer for some help.
- Try your manufacturer's tech support online or by phone.

TRANSLATORS

- Translators take a signal from one frequency and rebroadcast it on another.
- Translators and other low-power broadcasters are not part of the June 12 switch.
- OPB has full-power broadcasts in Portland, Eugene, Bend, Corvallis and La Grande.
 - o We have digital translators in Baker City and Cottage Grove.
- Any other OPB broadcasts are analog translators.
 - o They will not begin to change until sometime in summer of 2009.
- Translators can be identified by numbers in their call letters, or by the suffix -CA or -LP after the letters.
- Anyone watching an analog translator should have a converter box with analog pass-through.

TWIN-LEAD ANTENNAS

- TVs older than 20-25 years may not have any RF/coaxial cable or A/V connections; only twin-lead flat-wire connections that use two screws.
- Such TVs can still be connected successfully to converter boxes using a simple inexpensive part called a "balun."
 - o It acts as a junction between the RF coaxial cable from the box and the flat wire from the TV.
 - o Radio Shack or other electronics stores will have them.

VCR or DVD RECORDERS WITH CONVERTER BOXES

• Will my VCR still work?

- o VCRs will still work with converter boxes, but you'll need to make some changes in how you record programs.
- o There are also some limitations on how recordings can be made.
- o For playback only of both VHS tapes and DVDs, everything will work just as before.

• Connecting your converter box to your VCR

- o Leave the VCR/DVD connected to the TV just as it was.
- o Disconnect the antenna cable from the VCR/DVD.
- o Connect the converter box cable from "Out to TV" in its place.
- o Plug the antenna into "Antenna In" on the back of the converter box.

• Watching TV & recording at the same time

- Unless you have a very new VCR or pretty new DVD recorder with its own digital (called ATSC) tuner built in, you can't watch one program while recording another at the same time with just one converter box.
- o The converter box chooses the incoming channel, so one converter box can only tune to one channel at a time.
- To tune to two channels at a time (which is what you do when you watch one channel and record another), two converter boxes are needed or one converter box and one digital VCR/DVD recorder with its own ATSC tuner built in.

• Connecting two converter boxes

- o Buy a splitter at a TV or electronics store like Radio Shack. This will split the single line coming from the antenna into two lines.
- o Connect one line to each converter box. Connect one box directly to the TV. Connect the second box to the VCR.
- o The VCR's box will control the channel you record. The TV's box will control the channel you watch.
- O You'll want to physically separate the two boxes as much as possible, so the remote only controls the box you want to use.

Recording Tips

- o To record something overnight or when no one is there:
 - Program the VCR/DVD recorder to always record on the output channel of the converter box (usually 3).
 - Program the time into the VCR/DVD recorder just as you've always done.
 - Tune the converter box to the channel you want to record. Leave it turned on.
 - Be sure that the converter box default power saver setting of four hours has been disabled; otherwise the box will turn itself off after four hours of no activity. Use your menu function and check your manual for more info.

"WEAK [OR NO] SIGNAL" MESSAGE IS ALL I SEE ON THE SCREEN

- Some boxes, most notably the Digital Stream from Radio Shack, display this as the very first image on the screen, before set-up is complete.
 - o This is a completely meaningless message at this stage -- an unscanned box has no idea where to find **any** signal, no matter how strong.
- Refer to page 6 in the Digital Stream owner's manual and complete the steps for "Auto-scan."
 - o The box will not work until this is done.

If the Box Has Been Scanned

- If the antenna is other than a set-top one, check these things:
 - o Is the cable between the antenna and TV old or corroded?
 - o Is it a long run or longer than necessary? Long cable = weakened signal.
 - Are the connections loose or corroded?
 - o Are any parts of the antenna itself broken, bent, loose or missing?
 - o Are any splitters involved? Every splitter weakens the signal by half or more.
- If the box has been scanned, and the "weak signal" message appears only on some channels, the antenna probably needs to be adjusted, moved or upgraded.
 - o Best approach: Tune to a weak-signal channel.
 - o Bring up the converter box signal strength meter on the screen.
 - o Using trial and error, look for the antenna location that produces the strongest signal.