

XtraView

Troubleshooting an intermittent heartbeat

V1.0



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This Guide supplements the information supplied with decoders as well as any installation information available on our website.

For more information, visit www.dstv.com

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If you have technical comments or want to chat to other users about the installation and connection of a decoder or XtraView, visit the forums at www.dstv.com

BACKGROUND

Intermittent heartbeat reception can be caused by :

1. A signal that periodically gets attenuated (weakened) so that proper reception no longer takes place, or
2. An interfering Infra-red (IR) signal that corrupts the heartbeat reception, or
3. Electrical interference that causes the heartbeat detection circuitry to malfunction.

The first issue – attenuation (weakening) of the signal, can be caused by :

- o An incorrect Communication Port setting or connection.
- o Bad connectors, poor quality / damaged cable (e.g. damage from sun or bent too-sharply).
- o Unsuitable or faulty splitters or amplifiers.
- o Component failure (on the detection circuitry) of the decoder.

The second issue – IR interference, can be caused by :

- o Any source of Infrared e.g. fluorescent lights (*specifically energy saver bulbs*). These can enter the decoder directly, or be passed to the decoder from other rooms via tvLINK eye or remote blaster.
- o Other consumer electronics like Plasma or LCD screens, some heaters, laptops, cell phones, etc.

The third issue – electrical interference, can be caused by :

- o Faulty / missing "earth" on the television or home theatre system.
- o Faulty equipment sharing the same plug / multi-adaptor.

BEFORE STARTING TROUBLESHOOTING

- Check the XtraView status on both decoders. The primary decoder should be "Primary" and the secondary must be either "Secondary" or "Waiting for Communication" (go to Decoder Menu, Advanced Options, XtraView Set-up). If not, contact the MultiChoice Call Centre as XtraView has either not been activated or has not been activated correctly.
- It's very difficult to solve a problem if it is not occurring – so the following procedures assumes that the secondary decoder is currently "Waiting for Communication".
- If you are experiencing intermittent remote response, chances are good that you have an IR interference problem and you may save some time and effort by doing Step 2 "Checking for IR Interference" first.

STEP 1 : CHECKING FOR SIGNAL ATTENUATION

1. CHECK XTRAVIEW SETTINGS

Check that the XtraView settings (specifically the Communication port and tvLINK settings) are correct for your specific installation. If you are unsure, see the latest Installation manual, or check with a MultiChoice Accredited Installer. An incorrect port setting may seem to work, but will cause additional losses and could be the problem.

2. CHECK CABLES AND CONNECTORS

- Check that connectors are properly made. There must be no stray metallic “hairs” inside the connector and you should not be able to just pull the connector off the cable.
- Check all connections to the decoder as well as any splitters / amplifiers. They should be properly attached (and not just by one or two turns of the connector).
- Replace cables that have been :
 - Exposed to sun so the outer plastic covering is brittle. (This will cause water to enter the cable and will weaken signal travelling through it.)
 - Squashed flat or bent – any damage from which the cable does not fully regain its former form. When the round shape of the cable gets changed, the characteristics (e.g. impedance) changes and reflections and weakening of signals occur.

3. CHECK THE LINK BETWEEN THE DECODERS

If this is a large / complicated job, you can do the other checks first and return to this step at the end.

- Replace the existing path (through which the heartbeat travels) between the primary and secondary decoder with a new cable and properly made-off connectors which directly link the decoders (bypass all splitters / combiners / amplifiers).
- ❗ *Note : Remember to confirm that the Communication port settings in the XtraView menus on the decoders reflect the actually connected ports.*
- Monitor the secondary decoder – if it starts to work, you have confirmed that the problem lies in the old “link”.
 - Replace the old link and then start replacing / bypassing one part at a time until the system starts working again. You have then identified the guilty component and need to replace it. (It is recommended that you also go through the information contained in “Signal Splitting and Combining” on www.dstv.com.)

4. CHECK THE RF DETECTION CIRCUITRY ON THE DECODER

There have been cases of this being problematic on the SD PVR.

- Check that the tvLINK is enabled in the decoder menu.
 - Remove all cables attached to RF IN and RF Out on the decoder.
 - Set the communication port setting in the XtraView menu to RF Out. (On the SD PVR this setting is fixed).
 - Plug a tvLINK eye directly (using an adaptor or short cable) into RF Out connector on the back of the decoder PVR.
 - Cover the front panel of the decoder and check that the decoder still responds when you use the remote control. (The tvLINK eye should relay the remote messages to the decoder via the RF Out port)
- ❗ *Note : Check that you are using the right remote mode.*
- If the decoder does not respond, you have faulty tvLINK detection circuitry and will need to get the decoder replaced before you will be able to activate / make use of XtraView.

STEP 2 : CHECKING FOR IR INTERFERENCE

- Adjust the TV and decoder so you are able to view the XtraView communication status of the secondary decoder.
- Properly cover any tvLINK eye(s) that are connected anywhere in the house (do not use just a few sheets of paper or a thin cloth).
- ❗ *Note : don't stand in front of the decoder or tvLINK eye – you may be shielding it from the interference.*
- If there is no improvement*, jump to “Check for IR Interference directly to the decoder” (page 7)
- If the secondary decoder reports “Receiving Valid Heartbeat” at least once per minute* (i.e. the secondary starts working) the tvLINK must be causing the interference.
- ❗ **The current software sometimes causes an invalid fourth or fifth heartbeat, so a single invalid heartbeat (or no reaction) can be expected every now and again, even in a properly working system. The problem only remains if there is no valid heartbeat indication for longer than a minute.*

1. CHECK FOR IR INTERFERENCE FROM A tvLINK EYE:

- If uncovering the tvLINK eye causes the heartbeat to fail, the eye must be transmitting interference to the decoder. We will now determine where that interference is coming from :
 - Starting with the lights, switch off all electrical equipment in the room with the tvLINK eye...one-at-a time...and monitor the secondary XtraView status after each switch-off.
 - When valid heartbeats start appearing, the last thing to be switched off is the guilty party.
 - If it is a light, replace the bulb, use another light source when watching TV, or place the tvLINK eye so it is not exposed to that light.
 - If it is anything else causing interference (e.g. sunlight or something like a laptop's IR communication port or even a heater) the interference must be removed, or the tvLINK eye placed so it is not exposed to it.

2. CHECK FOR IR INTERFERENCE DIRECTLY TO THE DECODER:

- Properly cover the front panel of the secondary decoder (do not use just a few sheets of paper or thin cloth) and check its XtraView communication status.
- If covering the front panel has no effect, go to “Check for Electrical Interference” on page 7.
- If covering the decoder front panel results in the heartbeat being received properly, (the secondary starts working) interference must be coming in via the front panel.
- Starting with the lights, switch off all electrical equipment in the room...one-at-a-time...and monitor the secondary XtraView status after each switch-off.
- When valid heartbeats start appearing, the last thing to be switched off is the guilty party.
- If it is a light, replace the bulb, use another light source when watching TV, or place the decoder so it is not exposed to that light.
- If it is anything else is causing interference (e.g. sunlight or something like a laptop's IR communication port or even a heater) the interference must be removed, or the decoder placed so it is not exposed to it.
- If everything except the TV and decoder(s) have been switched off and no valid heartbeats are being received, the interference is possibly coming from your TV.

3. CHECK FOR IR INTERFERENCE FROM THE TV

- Switch off the TV (just put it in standby) and check the XtraView status from another viewing environment.
- If there is still no valid heartbeat, go to “Check for Electrical Interference” (page 8).
- If the heartbeat comes through (at least once a minute), the TV must have been causing IR interference. Here are some suggested remedies :
 - Move the secondary decoder further away from the TV and see if that resolves the problem.
 - If the primary decoder is in a different room, switch primary and secondary decoders around. (Either physically, or by changing the activation via the call centre).
 - If the decoders are in the same room, permanently cover the front panel / hide the secondary decoder and use the Relay Remote commands feature on the primary decoder to control the secondary.
- ❗ *Final note on IR Interference - If the interference persists (i.e. you cannot find the interference, but your decoder starts working when you cover the front panel), the following trick may help you find the interfering IR source - Look at the room (in the dark) using a digital still or video camera – any IR source will show up as a bright spot.*

STEP 3 : CHECKING FOR ELECTRICAL INTERFERENCE

- Switch off the TV and pull out its plug.
- Check the XtraView status from another viewing environment.
- If the heartbeat starts coming through, check the power lead on your TV :
 - If either end has only two metal pins, your TV is not earthed and you can consider calling an electrician or the TV manufacturer to ask about getting the TV earthed.
 - **NOTE** : There have only been 2 confirmed cases where earthing the TV has resolved intermittent heartbeats, so this should be used as a last resort. (Electrical interference gets passed from the TV to the decoder through the video / RF connection causing the IR detection circuitry on the decoder to stop working).
- Lastly, if the decoder is sharing a plug or multi-adaptor with any other equipment, use an extension and power it from another plug (or remove the other equipment), so the decoder is the only device being fed from that specific plug.
- If a valid heartbeat starts coming through, you need to power your decoder, (or the other equipment sharing the original plug), from somewhere else.
- If after following all these steps carefully, you still cannot get the XtraView network to function properly, you have a case that is unique enough from MultiChoice to follow up as a special case. Contact us via the DStv website forums. (<http://forum.dstv.com/>)



For full XtraView information, including detailed installation options and a guide to installation prices, go to www.dstv.com