

# **HDHomeRun Troubleshooting Guide (20080104)**

HDHomeRun Software release 20080104 contains enhancements and improvements used in this guide.

Please download and install the latest HDHomeRun software:

<http://www.silicondust.com/wiki/downloads>

# Table of Contents

HDHomeRun Setup errors (Windows):.....	3
Symptom: “Side-by-side” error when attempting to run HDHomeRun Setup.....	3
Symptom: HDHomeRun Setup crashes on 64-bit Vista with nForce motherboard.....	3
Symptom: “Discovery error 4001”.....	3
HDHomeRun not found by HDHomeRun Setup/HDHomeRun Config:.....	4
Symptom: No LEDs lit on HDHomeRun.....	4
Symptom: Only the Power LED lit on the HDHomeRun.....	4
Symptom: Ethernet LED lit, connected to network (Windows).....	4
Symptom: Ethernet LED lit, connected directly to PC (Windows).....	4
Symptom: “Discovery error 4001” reported by HDHomeRun Setup (Windows).....	5
Tuners not found by DVR software (Windows):.....	6
Check 1: HDHomeRun Setup.....	6
Check 2: MCE 2005 specific requirements.....	6
Check 3: Prior SageTV install.....	6
Digital Cable remapping (Windows):.....	7
Symptom: MCE TV Setup Wizard does not find channels above 1800.....	7
Symptom: No channels have remap numbers in the channel editor.....	7
Symptom: Some channels do not have remap numbers in the channel editor.....	7
Symptom: MCE TV Setup Wizard reports digital channels above 2000.....	7
Symptom: MCE TV Setup Wizard reports no signal (one red bar) for QAM channels.....	7
Symptom: MCE live TV reports no signal for all QAM channels.....	7
Task: Backing up, restoring, or deleting the channel configuration.....	7
Advanced: Custom guide numbers.....	8
Video corruption / video errors.....	9
Check 1 - Record vs playback.....	9
Check 2 - Signal Strength and Signal Quality.....	9
Check 3 - Logged tech support.....	9
Symptom: Playing a recording in DVR software has video errors. Playing same recording in VLC works.....	10
Symptom: Network packet loss.....	10
Symptom: Network packet loss.....	10

## **HDHomeRun Setup errors (Windows):**

**Symptom: “Side-by-side” error when attempting to run HDHomeRun Setup.**

32-bit Vista: Download and install vcredist:

[http://download.silicondust.com/vendor/dotnet/vcredist\\_x86.exe](http://download.silicondust.com/vendor/dotnet/vcredist_x86.exe)

64-bit Vista: Download and install both the 32-bit and the 64-bit versions of vcredist:

[http://download.silicondust.com/vendor/dotnet/vcredist\\_x86.exe](http://download.silicondust.com/vendor/dotnet/vcredist_x86.exe)

[http://download.silicondust.com/vendor/dotnet/vcredist\\_x64.exe](http://download.silicondust.com/vendor/dotnet/vcredist_x64.exe)

**Symptom: HDHomeRun Setup crashes on 64-bit Vista with nForce motherboard.**

The nVidia Forceware Network Access Manager software crashes the HDHomeRun software when it attempts to access the network. Uninstalling the nVidia Forceware Network Access Manager software will fix the problem.

**Symptom: “Discovery error 4001”**

Please email tech support - [support@silicondust.com](mailto:support@silicondust.com) or file a trouble ticket.

## **HDHomeRun not found by HDHomeRun Setup/HDHomeRun Config:**

### **Symptom: No LEDs lit on HDHomeRun.**

Check that the plug pack is the 5V 2A plugpack supplied with the HDHomeRun.

File a trouble ticket.

### **Symptom: Only the Power LED lit on the HDHomeRun.**

Power cycle the HDHomeRun. Check that the LEDs flash through a sequence.

If the LEDs do not flash through a sequence when power cycled then file a trouble ticket.

If the LEDs flash through a sequence when power cycled then the HDHomeRun is working but is not getting Ethernet link. Try a different Ethernet cable and a different port on the switch.

### **Symptom: Ethernet LED lit, connected to network (Windows).**

- 1) Check that the DHCP server is running. If using a home router then most likely the router is providing DHCP - check the router is running.
- 2) If using a static IP address on the PC - check that the subnet mask is configured correctly. For a typical 192.168.x.x home network the subnet mask should be 255.255.255.0.
- 3) Disable any third-party firewall software to test.
- 4) Run HDHomeRun Setup and click rescan. You should see two tuner icons without red x.

If HDHomeRun Setup does not show two tuner icons after these steps then a packet capture may be required. File a trouble ticket - SiliconDust support will guide you through the test.

### **Symptom: Ethernet LED lit, connected directly to PC (Windows).**

- 1) Check that the IP address of the network interface is either:
  - Set to "Obtain an IP address automatically", or
  - Set to a static IP address in the range of 169.254.x.x (suggest 169.254.1.10) with a subnet mask of 255.255.0.0. Leave the gateway blank.
- 2) Check that HDHomeRun Manager is running (icon by the clock). If you changed the IP address configuration please open HDHomeRun Manager and click rescan so HDHomeRun Manager detects the IP address change.
- 3) Delay - if configured to "obtain an IP address automatically" it will take up to 3 minutes for the PC to choose an AutoIP address (169.254.x.x). Setting a static 169.254.x.x IP address will eliminate this delay.
- 4) Delay - it will take approximately 1 minute for the HDHomeRun to obtain an IP address and be detectable.
- 5) Open HDHomeRun Manager or HDHomeRun Setup and click rescan.

**Symptom: “Discovery error 4001” reported by HDHomeRun Setup (Windows).**

Please email tech support - [support@silicondust.com](mailto:support@silicondust.com) or file a trouble ticket.

## Tuners not found by DVR software (Windows):

### Check 1: HDHomeRun Setup

Run HDHomeRun Setup. Check that two tuner icons are shown.

- If no tuner icons are shown - see section on “HDHomeRun not found by HDHomeRun Setup/HDHomeRun Config”.
- If tuner icons show red X marks - see section on “HDHomeRun not found by HDHomeRun Setup/HDHomeRun Config”.
- If tuner icons show green ticks - the BDA drivers are installed correctly.
- If the tuner icons do not show green ticks - click Apply.

### Check 2: MCE 2005 specific requirements

- MCE 2005 requires an Analog/NTSC TV tuner adapter to be present before it will allow a digital tuner to be detected. Check that a Analog/NTSC TV tuner is installed and working.
  - Vista does not require an analog tuner to be present.
- The “MCE Rollup 2” update is required. Run Windows Update and go through the optional updates (custom mode). If the “MCE Rollup 2” is displayed then install it. If the MCE rollup 2 update is not shown then it is most likely already installed.

### Check 3: Prior SageTV install

The SageTV uninstaller contains a bug that breaks the use of digital tuners in other DVR applications.

- **XP / MCE 2005:** Run HDHomeRun Setup and go to the Support tab. Click “Reinstall” to reinstall the Windows BDA components.
- **Vista:** The only known solution is to reinstall SageTV. You can then delete SageTV from Program Files if desired.

## Digital Cable remapping (Windows):

### **Symptom: MCE TV Setup Wizard does not find channels above 1800.**

- 1) Run HDHomeRun Setup. Check that the Signal Source is set to Digital Cable. Click Apply.
- 2) Switch to the Lineup tab and enter the channel editor. Check that channels have remap numbers. Click Apply.
- 3) Run through the MCE TV Setup Wizard again. Make sure to choose the Manual option (channel lineup is not imported by MCE in automatic mode).

### **Symptom: No channels have remap numbers in the channel editor.**

If using an antenna then this is normal - OTA channels are not remapped.

If using digital cable - go to the Tuners tab and set the Signal Source to Digital Cable.

### **Symptom: Some channels do not have remap numbers in the channel editor.**

There is a 68 channel limit to the number of channels that can be remapped.

Un-tick the enable check box on less interesting channels so that the total number of enabled channels is 68 or less.

### **Symptom: MCE TV Setup Wizard reports digital channels above 2000.**

This situation is triggered by an analog source with channel numbers above 1000. The digital stations have been moved from 1000+ to 2000+ by MCE.

Un-tick all channels below 2800 and tick all channels above 2800.

### **Symptom: MCE TV Setup Wizard reports no signal (one red bar) for QAM channels.**

Make sure that you un-tick any non-HDHomeRun digital tuners in the MCE TV Setup Wizard. MCE will not work with remapped QAM if there are any other digital tuners selected.

There is a bug in the MCE TV Setup Wizard (MCE Vista and MCE 2005) where it will incorrectly use the first digital tuner for the signal check even if you un-ticked that tuner. As a result the signal check reports one red bar for most or all remapped QAM channels if there is another ATSC tuner installed. This symptom is harmless - just ignore the signal strength readings.

### **Symptom: MCE live TV reports no signal for all QAM channels.**

Run through the MCE TV Setup Wizard again. Select the manual option.

Make sure that you un-tick any non-HDHomeRun digital tuners in the MCE TV Setup Wizard. MCE will not work with remapped QAM if there are any other digital tuners selected.

Select the option to configure guide listings.

At the signal check stage un-tick all channels below 1800 and tick all channels above 1800.

### **Task: Backing up, restoring, or deleting the channel configuration.**

The HDHomeRun Setup channel editor stores the channel configuration in XML files:

**XP:** C:\Documents and Settings\All Users\Application Data\SiliconDust\HDHomeRun

**Vista:** C:\ProgramData\Application Data\SiliconDust\HDHomeRun

### **Advanced: Custom guide numbers.**

The HDHomeRun channel editor defaults to generating channel numbers starting from 80.1 (1801 in MCE). The advanced mode in the HDHomeRun editor allow these numbers be be user-specified.

The guide number can be entered in any one of three forms:

ATSC <major>.<minor> form (eg 22.3)

Cable channel number (eg 223)

MCE channel number (eg 1223)

Numbering rules:

ATSC major must be in the range of 1 to 99.

ATSC minor must be in the range of 1 to 9.

Cable numbers must be in the range of 11 to 999 and the last digit cannot be a zero.

MCE numbers must be in the range of 1011 to 1999 and the last digit cannot be a zero.

If a guide number is entered that is not valid it will show red and be ignored.

## **Sound problems:**

### **Symptom: Picture but no sound on some encrypted channels.**

Some cable providers encrypt the sound only on some channels. The HDHomeRun should detect this and indicate that the channel is encrypted in HDHomeRun Config (GUI).

### **Symptom: Picture but no sound in MCE.**

This can indicate a problem with the AC3 codec installed.

Download and install AC3filter: <http://ac3filter.net/project/1/releases>

### **Symptom: Sound is lower volume on digital channels compared with analog channels.**

The gain applied by the audio codec is dependent on the AC3 audio codec used.

The AC3filter codec allows the gain to be adjusted for digital channels:

<http://ac3filter.net/project/1/releases>

## Video corruption / video errors

There are three common sources of video corruption:

- Reception issues.
- Network related issues.
- Codec/playback issues.

### Check 1 - Record vs playback.

- Make a recording of the problem channel in your DVR application (or use an existing recording that shows the symptom).
- Try playing the recorded video file in VLC. To do this you will need to find the specific file using Windows Explorer. Right click on the file and choose the option to play with VLC.
- If VLC plays the recording without error then it suggests the problem is with the MPEG2 codec installed in Windows or with the video drivers. See symptom below.
- If VLC shows the same symptom then the problem is in the recording. Proceed to check 2 - signal strength and signal quality.

### Check 2 - Signal Strength and Signal Quality.

- In your DVR application go into live TV mode. Choose a problem channel.
- Double-click on the HDHomeRun Manager icon by the clock to open HDHomeRun Manager.
- Click on the Status tab. Click on one of the tuner icons to select the tuner.
- Digital Antenna:
  - Check that the signal strength is above 50% minimum (75% recommended).
  - Check that the signal quality is above 50% minimum.
  - Check that the symbol quality is 100%.
- Digital Cable:
  - Check that the signal strength is above 80% minimum (90% recommended).
  - Check that the signal quality is above 50% minimum.
  - Check that the symbol quality is 100%.

### Check 3 - Logged tech support.

Occasional reception issues or network issues can be logged and checked by SiliconDust support.

Run HDHomeRun Setup and go to the support tab. Enable debug logging (“Enable connection to SiliconDust support server”). Switch back to the system tab and click rescan.

- Live TV problems - stay on a problem channel for at least 5 minutes. File a trouble ticket and include the time you tuned to that channel.
- Occasional problems - when you see a new recording with an error please file a trouble ticket. Include the time the recording was made and how often the video problem was seen in the

recording.

**Symptom: Playing a recording in DVR software has video errors. Playing same recording in VLC works.**

If a recording is made by the DVR software and plays error-free in VLC then the problem is most likely with the MPEG2 video codec or video drivers.

- Check the nVidia/ATI/Intel website for the latest drivers for your video card.
- XP / MCE 2005: Check the video (MPEG2) codec by using the following utility:  
<http://www.microsoft.com/downloads/details.aspx?FamilyID=de1491ac-0ab6-4990-943d-627e6ade9fcb&displaylang=en>
- Vista: Check the video (MPEG2) codec by using the following utility:  
<http://mediacenterexpert.blogspot.com/2006/07/vista-media-center-decoder-utility.html>

**Symptom: Network packet loss**

Check for any third party firewall or security software that might affect network communication.

- ZoneAlarm has problems keeping up with the video data rate and drops packets. Disabling ZoneAlarm is not sufficient to fix the problem - it must be uninstalled to remove it from the packet path. A reboot will be required after uninstalling ZoneAlarm. We are working with ZoneAlarm to help the resolve this issue.

**Symptom: Network packet loss**

Check the speed and brand of the Ethernet interface:

Right click on My Network Places and choose properties.

Double click on the Local Area Connection icon to bring up the status page.

Check that the "Speed" is reported as 100Mbps or 1Gbps.

Click Properties. Check the brand/model of the network interface:

- nForce based interface: Click Configure and switch to the Advanced tab. Disable checksum offloading features.
- Intel based interface: Click Configure and switch to the Advanced tab. Set the Interrupt Mitigation option to Extreme.
- Other chipsets: Click Configure are switch to the Advanced tab.
  - Increase the Receive Buffer size (if this option is present).
  - Test with the Interrupt Mitigation/Moderation setting both On and Off (if this option is present).