

## The DIRECTV AM21-700 Off-Air Tuner

March 2008

### Introduction

First announced at CES 2008, the solution for those HR21 users who desire the ability to watch and record OTA HD programming has been released to the public. Manufactured for DIRECTV by Pace Electronics and designed to match the HR21 in appearance, the AM21-700 is a sleek black box that complements the HR21 it accompanies. A group of HR21 users here at DBSTalk.Com were lucky enough to have been selected by DIRECTV to receive and test the AM21-700 over the past several weeks.

### Dimensions, Appearance, and Ports

- Color: Glossy Black
- Weight: 4.3 pounds
- Height: 1.18 inches
- Width: 15.125 inches
- Depth: 12.25 inches
- Off Air In (F-connector)
- Receiver Link (USB Type B)
- Power In (HR21 power cord)



Photograph by Earl Bonovich

## From the Outside



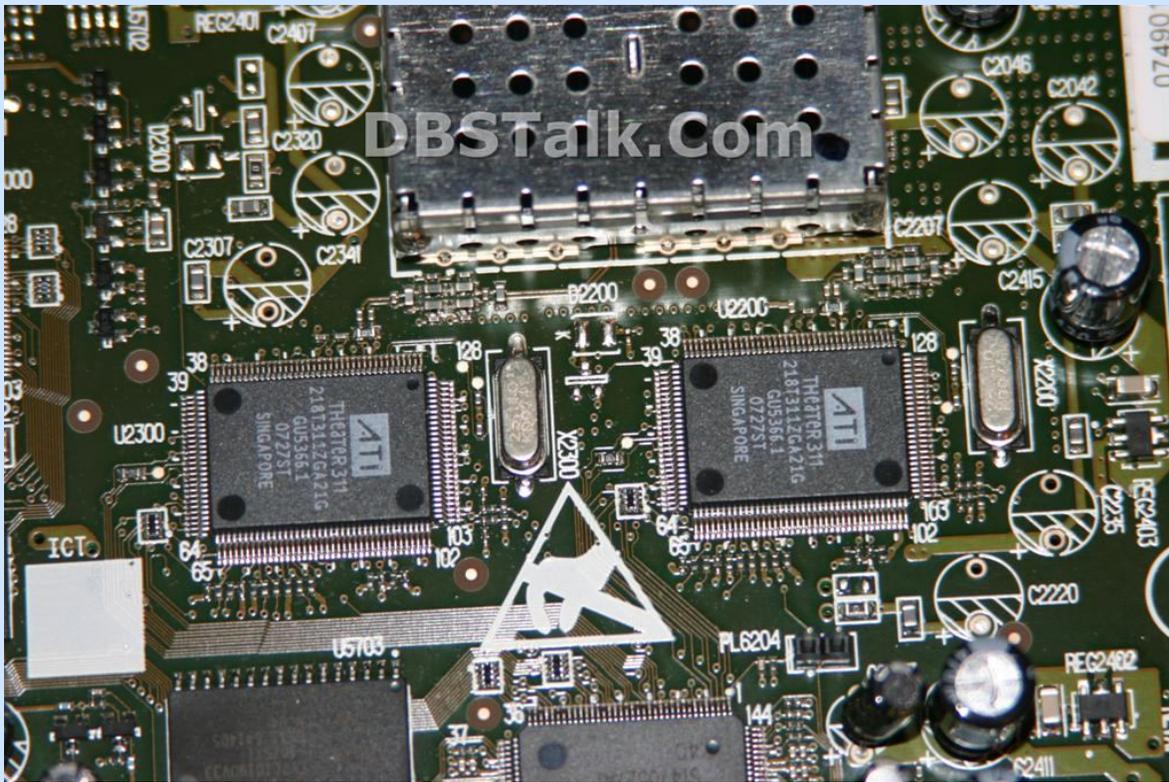
Photographs by Smuuth

## From the Inside

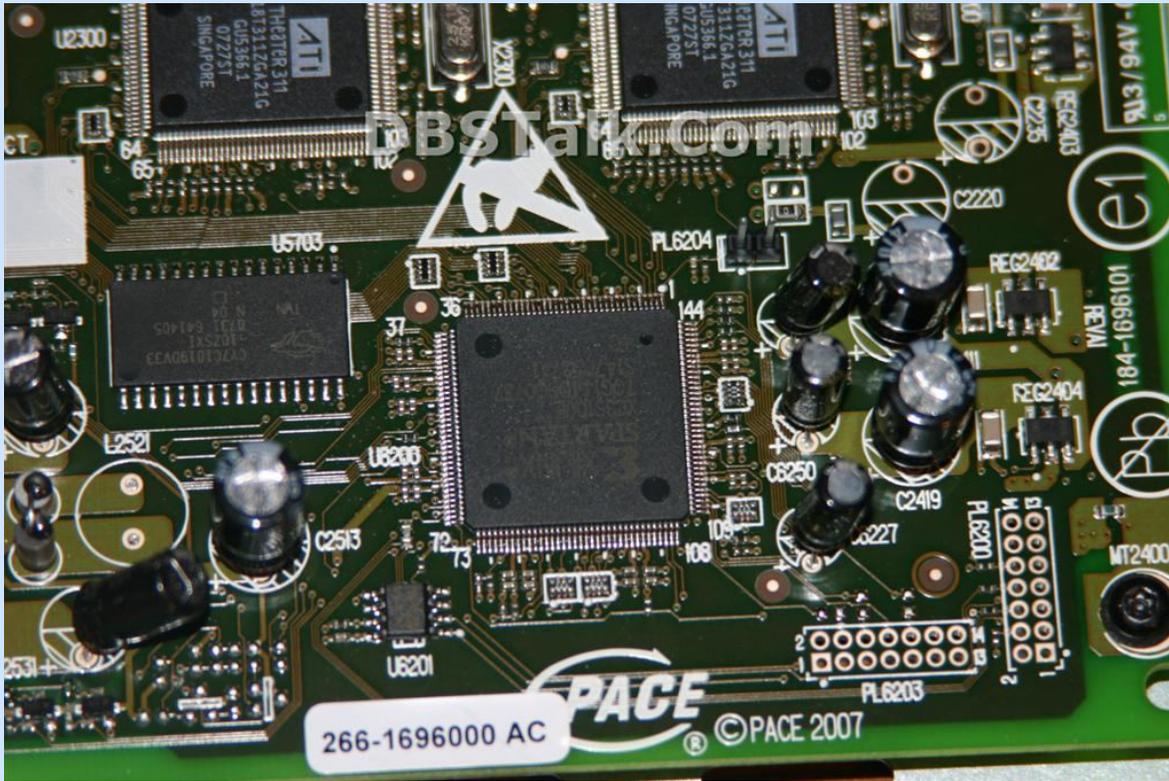
As can be seen from the following four photographs, the AM21 case was sized to match the HR21 in width and depth and is larger than necessary for the functional electronic components it contains. To interpret the ATSC digitally modulated input signals (8VSB); the AM21 uses two ATI Theater 311 IC chips to output an MPEG compliant transport stream.



Photographs by Earl Bonovich



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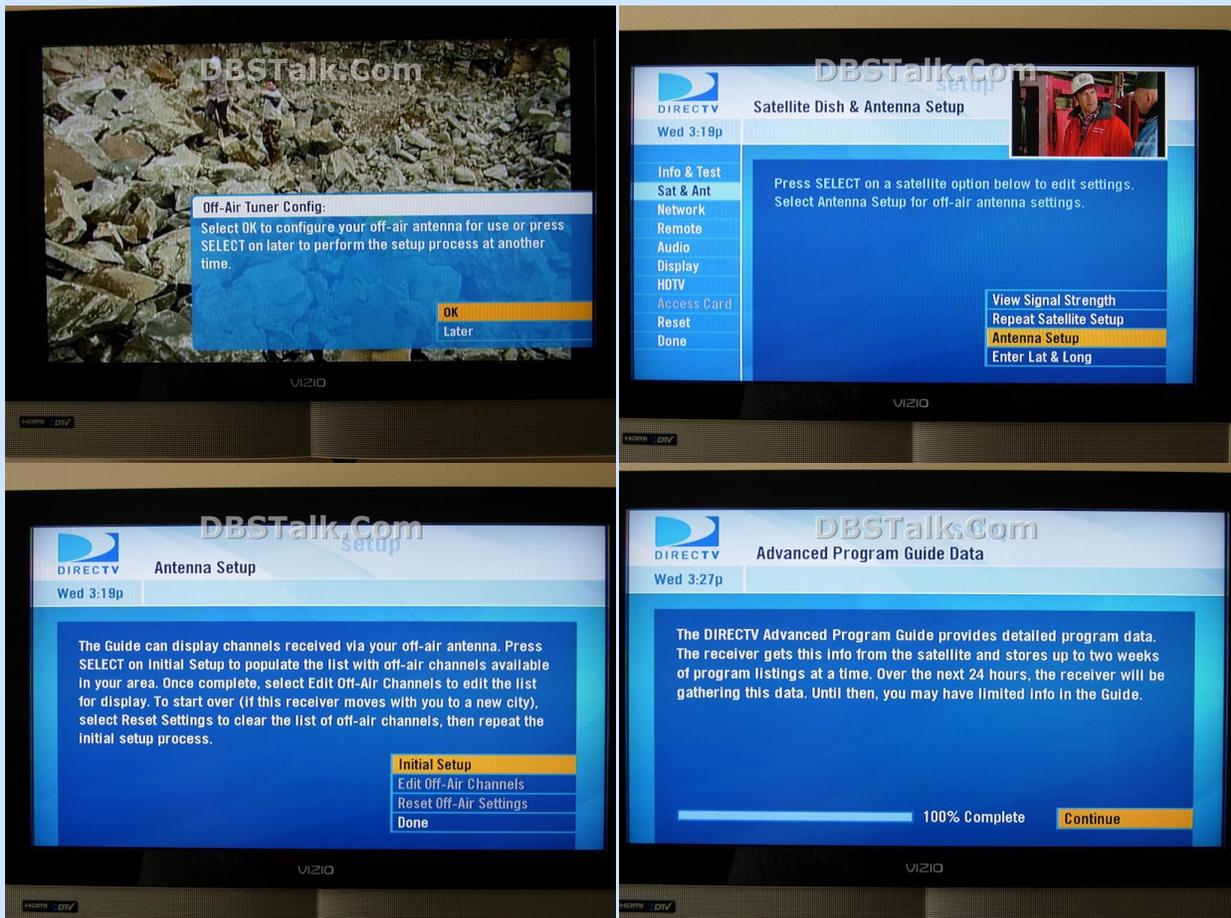


Photograph by Earl Bonovich

# Setup

Setup is extremely straightforward. Disconnect the power from the HR21. Connect USB between the AM21 and the HR21, connect the power cord coming out of the AM21 to the HR21, and connect the OTA antenna cable to the AM21. Once all connections are in place, connect the power cable removed from the HR21 to the AM21. The HR21 HD DVR will reboot normally and then the process of setting up the antenna via software can begin.

An on-screen message will appear prompting you to go to the Initial Setup screen for the antenna. If you choose Later, you can get there by pressing Menu > Parental, Fav's & Setup > System Setup > Sat & Ant > Antenna Setup > Initial Setup.



Photographs by Smuuth

When you are done with Setup, press GUIDE and go to channel 2 to see if your off-air locals are now in the guide. They will have channel numbers like 2-1, 2-2, 4-1, etc. The name and number box on the left-hand side of the guide will be darker than the satellite-delivered channels.

**Note 1: You MUST subscribe to HD Access in order for the AM21 Off-Air Tuner to function.**

**Note 2: The AM21 does NOT increase the number of concurrent recordings possible with the HR21.**

## Observations

The AM21 was tested under two failure scenarios while watching an OTA channel:

**1) Loss of power to the AM21 without loss of power to the HR21:**

The AM21 was set up using a spare power cord, instead of following the normal directions. Power was then removed from the AM21.

**2) Loss of USB signal:**

With the AM21 and HR21 powered, the USB cable was disconnected.

Both failure scenarios had the same result - a blue box appeared announcing that "Tuner, Off-Air 1, has been removed," and the HR21 retained the last-displayed image. The following photo displays the resulting error message in both scenarios. Upon restoring the failed component (power or USB connection), the signal to the HR21 was restored within 5 to 10 seconds, and the error message disappeared within 15 seconds.



Photograph by say-what

## Conclusions

The AM21 Off-Air Tuner is a simple, easy-to-install, elegant, and stylish component providing OTA capability for all models of the HR21. Not every DIRECTV DVR user needs or wants the ability to tune in OTA digital signals, but for those who do, these units will provide that capability in an attractive, DVR-matching package.

## Credits

The CE team that was privileged to field test the AM21 would like to thank the DIRECTV developers for once again proving they listen and respond to their customers. We would also like to thank Earl Bonovich and the DBSTalk.Com staff for their tireless support of the CE Program.

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