

Arion AF9400PVR HDMI

Perfect Picture Quality Thanks to the Scaler

The term HDTV has been on everyone's mind for quite some time now and the countless plasma and LCD TV owners are patiently waiting for a breakthrough in this new technology. In Europe though the reality still seems to be that only a handful of HD transmissions are available and that most of the channels are still only in SD format. If you want to watch an SD program on a large diameter TV screen, you'll quickly discover that this may not be the best solution.



Info Bar

The South Korean company Arion thought about ways in which they could help with this problem and came up with the idea to develop a PVR receiver with a built-in Scaler. The Scaler's job is to take the incoming signal and increase its resolution by interpolating the missing pixels such that this increased resolution does not contain any raster, something that is unavoidable with a simple increase in resolution.

The cabinet of the AF9400PVR HDMI is simple but elegant. On the front panel you will find an extremely easy to read VFD display as well as a fold-down flap behind which are a set of eight buttons to control the receiver should the remote control go missing.

This flap also hides two CI slots that can be used with all the typical modules (Irdeto, Seca, Viaccess, Conax, Nagravision, etc.). A pair of LEDs on the left and right side of the housing indicate the receiver's operational status.



The excitement began to build when we took a look at the rear panel. In addition to a satellite IF input and looped-through output for both of the tuners, we also found two Scart connectors, an S-Video

output and naturally an HDMI jack to connect the receiver to a plasma or LCD TV. On top of that there are also three RCA video and stereo audio output jacks, a programmable 0/12V output, an RS-232 interface, a USB 2.0 output to link with a PC, an RF modulator output and, of course, an optical digital audio output. To round out the entire picture, there's also a main power switch.

The included remote control is ergonomically designed and sits nicely in your hand with buttons that are clearly labeled. As a special bonus, Arion also included a second, smaller remote control with limited functions; an interesting idea, because it would make it easier for those less technically-inclined family members to use their new receiver.

Especially noteworthy is the detailed user manual; it is logically written and explains every function of this receiver in easy to understand steps.

Everyday Use

The new Arion receiver is definitely multi-lingual in terms of the on-screen menu languages. Next to English, German, French, Italian, Spanish, Greek, Hungarian, Dutch, Farsi, Polish and Portuguese, the user can also choose from Romanian, Russian, Swedish, Serbian and Turkish.

The video signal can be



delivered via Scart in RGB and CVBS modes. Additionally, multiple modes are available for the 4:3 and 16:9 screen sizes. Along with the PAL standard, the receiver can also handle NTSC signals and can even be set to automatically switch between the two standards.

Since this is a twin tuner PVR, both tuners can be operated in three different modes. In Loop Mode, only one satellite signal source is needed since the input signal is looped-through from the first tuner to the second tuner. In this case, while one channel is being recorded, not all of the remaining channels will be available on the second tuner. In Twin Mode, two identically switched satellite signal



sources are routed to both tuner inputs so that every channel is available on both tuners at the same time. The T1/T2 Mode tells the AF9400PVR HDMI that both tuner inputs will be occupied but with independent satellite signals. In this mode, not every channel is available on both tuners.

A motorized antenna (DiSEqC 1.2 or 1.3/USALS) can be set up directly in the installation assistant. The next step displays the list of 54 satellites that unfortunately isn't quite up to date.

During the installation, it is actually quite easy with a single push of a button to set up the LNB and DiSEqC parameters for each individual satellite. In addition to the two motor control protocols, the Arion AF9400PVR HDMI also supports DiSEqC 1.0 and 1.1 and is therefore capable of handling multi-feed reception using up to 16 LNBs. And unlike many receivers from other manufacturers, this new Arion box actually comes with a programmable 0/12V output that can also be set up for each individual satellite.

a network scan is also possible as is scanning for only free-to-air (FTA) channels.

In the Channel Editing menu, everything is geared towards organizing the channel and transponder lists. As many as 8000 channels can be stored and in this menu they can be deleted, moved, renamed, locked out with a PIN code or transferred into one of four Favorites lists.

For owners of plasma and LCD TVs the menu settings become especially interesting: here you can, among other things, set up the HDMI output signal to your personal needs. In our tests using a Technisat LCD and a Pioneer plasma TV, it quickly became clear that this step was absolutely necessary in order to get optimal picture quality. Next to brightness, contrast and sharpness, you can set noise suppression to three different levels.

The Scaler works in three different resolution modes: 576p, 720p and 1080i. If you still intend to use the two Scart jacks despite having the HDMI outputs, the same menu also carries all of the

The importance of the subsequent decryption must be stressed. The receiver can at any time take a prerecorded program stored on its hard drive and automatically copy and thereby decrypt it. The disappointment that used to be associated with recorded programs that could no longer be decrypted because the provider changed the encryption codes is now a thing of the past. As long as the CI module supports this function, the receiver can simultaneously take two programs and store them decrypted. In a test with an Alphacrypt CI module, it worked perfectly.

The Arion AF9400PVR HDMI is available from the manufacturer with a pre-installed hard drive or without one so that you can select your own hard drive. Even though the hard drives installed by the manufacturer are specifically designed for home entertainment use and thereby are very quiet, it is also possible for the hard drives to be automatically turned off after a user-settable time.

After this extensive journey through the many dif-

necessary setting possibilities. The receiver provides the video signal through the Scart outputs in CVBS and RGB. An S-Video output for a projection TV is available on its own output jack; unfortunately, YUV is missing.

The remaining three categories deal with the CI modules, the hard drive and subsequent decryption of previously recorded programs plus, of course, the extra accessories integrated by the manufacturer such as a calculator, calendar and various games.

ferent settings possibilities of this receiver, we naturally wanted to take a closer look at its operational features. What caught our eye was its ability to record four programs simultaneously.

Since the receiver has only two tuner inputs, the four programs that are to be recorded must naturally be on only two transponders. Based on the number of recordings, the receiver also takes those channels that can no longer be received and deletes them from the channel list. Recorded pro-



Expanded EPG Info |



Technical Parameters |



EPG |

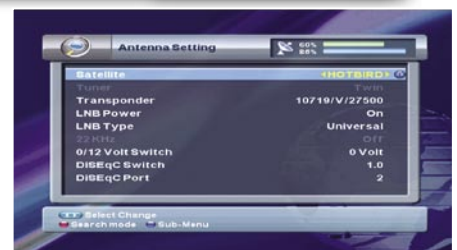


Main Menu |

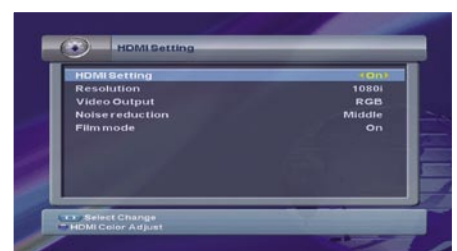


After a brief push of the red function button, the Arion begins to scan our selected satellites and completed scanning our 110 transponders in a blinding 4 min 20 sec.

The Main Menu is divided into six large areas: in the Channel Search menu, multiple settings for antenna configuration and satellite data can be taken care of. The receiver offers an automatic scan, a manual scan and an expanded search with manual PID entry. Of course,



Settings for Every Satellite |



HDMI Settings |

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Turkish	Türkçe	www.TELE-satellite.com/TELE-satellite-0807/tur/arion.pdf

grams that have already been viewed are marked with their own symbol. The receiver can also identify the spot where a playback was stopped so that a single push of a button is enough to restart the playback from where it was left off.

The detailed channel list can be activated by pushing the OK button. With the help of

spec given by the manufacturer was right on the money. Additional tests at some of our other locations also came back positive. It became quickly clear that the extremely sensitive Arion tuner is a step ahead of the competition and even managed to deliver a surprisingly good signal even though reception was just at the threshold level.



the function buttons, the list can be arranged by tuner and FTA/CAS and also be sorted alphabetically. Thanks to the multi-picture function, you can get a quick overview of currently running programs on 2,4,9,10,13 or 16 different channels.

When switching between channels, an Info bar appears momentarily and displays information on the current and upcoming program as well as specific channel data (text, subtitle, Dolby Digital audio, etc.) and information on the satellite in use. A second push of the OK button displays expanded EPG data on the current program as long as this information is made available by the provider. Another push of this button displays technical parameters for the channel such as frequency, polarization, symbolrate and PIDs.

Arion's EPG is generally quite good; it is logically laid out, is quickly displayed and shows all information correctly and neatly sorted. Timer entries can be directly set up through the EPG.

The Arion manufactured tuner is very signal sensitive and had no trouble dealing with the weaker signals on BADR 26° east or NILESAT 7° west. The receiver also mastered our SCPC test; the 2-45 Ms/sec.

As a manufacturer, it is almost a must to equip your PVR receiver with a USB 2.0 or network interface in order to be on the same level in the marketplace although the film industry and some PayTV providers might not be too happy with this. Arion did not miss the boat here either; in fact, they went the extra mile and installed a chipset that actually takes full advantage of the capacity of the USB 2.0 interface. In just about three minutes a 2GB recording was transferred from receiver to PC and this without needing any supplemental software since the receiver's hard drive is recognized by Windows as a storage device. Arion also offers a free settings editor that lets you easily manage the channel and favorites lists on your PC.

Since Arion is continuously concerned with the further development of their receivers, new software is regularly made available that can be comfortably downloaded via satellite or copied from a PC to the internal hard drive via the USB interface and then activated via the Data Manager. This is also possible for the channel list; it can be downloaded in the blink of an eye and without the use of the serial interface. Uploading and backing up of the channel list is only possible serially.

Expert Opinion



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The Arion AF9400PVR HDMI is a solid and easy to use receiver that did not reveal any problems in our tests. Thanks to the integrated Scaler, normal SDTV channels can be displayed in outstanding quality. Even those channels that because of cost issues have a less than average picture can have improved video quality. If a channel transmits in higher quality, the Scaler makes viewing naturally that much more fun. Especially noteworthy is, besides the extremely fast USB 2.0 interface, the possibility to record four channels at the same time.

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The satellite and transponder lists could be more up to date.

TECHNIC DATA	
Manufacturer	Arion, South Korea
Tel	+82 (0) 31 361 3000
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E-Mail	info@arion.co.kr
Model	AF9400PVR HDMI
Function	Digital Satellite PVR Receiver with built-in Scaler
Channel Memory	8000
Satellites	54
Symbolrate	2-45 Ms/sec. (in our Test starting at 2 Ms/s)
SCPC Compatible	yes
USALS	yes
DiSEqC	1.0 / 1.1 / 1.2 / 1.3
Scart Connectors	2
Audio/Video Outputs	3 x RCA
UHF Output	yes
0/12 Volt Output	yes
Digital Audio Output	yes
EPG	yes
C/Ku-Band Compatible	yes
Power Supply	100-240 VAC, 50/60 Hz